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BIRDS OF THE MARSHALL FIELD PERUVIAN EXPEDITION, 1922–1923

BY

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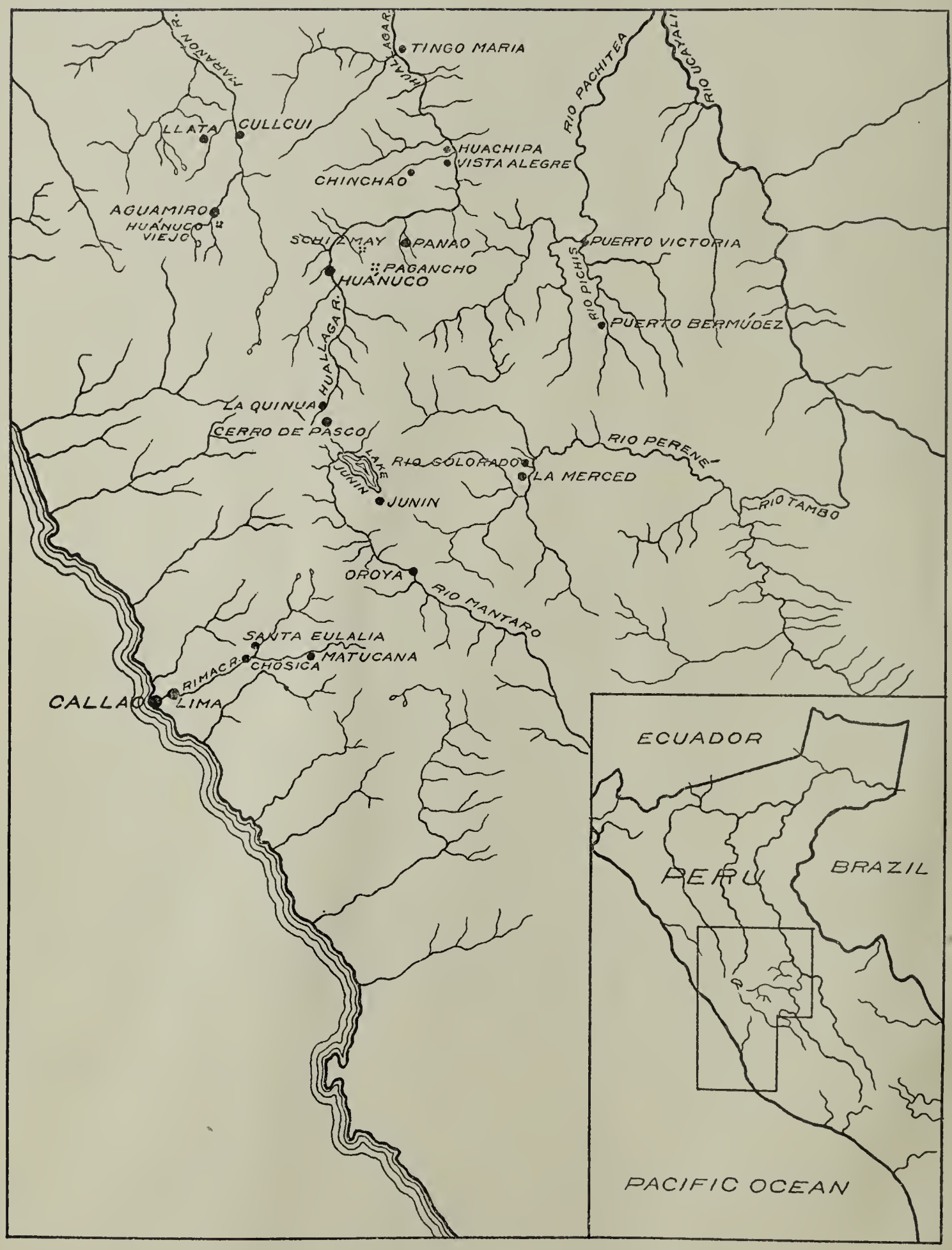

MAP OF CENTRAL PERU SHOWING COLLECTING LOCALITIES

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BY JOHN T. ZIMMER

Early in 1922, Field Museum of Natural History despatched an expedition to Perú for the purpose of collecting zoological and botanical specimens. As ornithologist of the expedition, I devoted my principal efforts to the bird life of the region and secured 1,497 specimens, to which Mr. Edmund Heller, mammalogist of the party, added a few skins from localities I did not visit. The following report is concerned with the collection of Peruvian birds secured during the course of the work, with comparative notes on allied species or subspecies from other parts of Perú or from adjoining countries. Descriptions of some of the new forms found in this material have been published in advance (Field Mus. Nat. Hist. Publ., **12**, No. 4, 1924; *t. c.*, No. 8, 1925; *op. cit.*, **17**, No. 1, 1929; Proc. Biol. Soc. Wash., **40**, pp. 207–210, 1927; and *op. cit.*, **42**, pp. 81–98, 1929). The following new names are used in the present account:

	Page
Aglaiocercus nom. nov.	290
Catamenia analis insignis subsp. nov.	460
Colonia colonus niveiceps subsp. nov.	368
Diglossa sittoides decorata nom. nov.	416
Jacana spinosa peruviana subsp. nov.	253
Ochthoeca leucophrys interior subsp. nov.	365
Thlypopsis ornata media subsp. nov.	452
Todirostrum cinereum peruanum subsp. nov.	384

Since the operations of the various sections of the expedition were carried on independently, I shall not attempt to exceed the description of my own activities. I left Chicago on March 19, 1922, and arrived at Callao on April 3. As soon as arrangements could be completed, I moved up the Rimac Valley a short distance to the town of Chosica, still in the arid tropical zone, using this as a base from which to visit Santa Eulalia and Vitarte. On April 27, I ascended by rail to the town of Matucana, considerably higher up the valley in the arid subtropical zone, and a week later continued the ascent and passed over the divide and up the Junín Plateau to Cerro de Pasco at the northern end of the table-land in the *puna* region.

On May 8, I began the descent of the Huallaga Valley, passing the head of the river just below Cerro de Pasco, and stopping for about a week at La Quinua, a short distance below, in the temperate zone about at timber line. Thence three days on horseback with pack train brought me to Huánuco in the semiarid subtropics, which constituted a base camp for future operations until the close of the year.

Three extended trips were made out of Huánuco. The first comprised an ascent of the mountains on the right bank of the Huallaga River on which two camps were placed, at 10,500 and 12,200 feet, in the humid temperate zone. Passing over a shoulder of the mountain, I next descended into a valley near the town of Panao and established a camp on the slopes of Mt. Pukagaga (the Quechua name for Quebrada Colorado), also in the humid temperate zone though with more decided subtropical affinities. Thence I descended into the Huallaga Valley again and returned toward Huánuco, with an extended pause at Hacienda Dispensa where the natural conditions of the countryside were less disturbed than at Huánuco itself.

On August 12, I again passed through Dispensa, crossed the river and the mountains on the left bank and entered the valley of the Chinchao River which I descended to near its junction with the Huallaga, at the junction also of the subtropical and humid tropical zones. Here I collected at two principal points: Vista Alegre, on the right bank of the Chinchao and at the lower margin of the subtropical zone; Huachipa, across the river in the tropical forest. October 20, I returned in the direction of Huánuco and, from October 21 to November 20, collected at Hacienda Vilcabamba in the neighborhood of the town of Chinchao, in the subtropical zone just below the cloud forests. Thence I retraced my route to Huánuco.

On December 5, I crossed the mountains on the left bank of the river near Huánuco through the Higueras Valley to the Marañón which I descended on the right bank to a small place known as Cullcui or Cullquish in the arid temperate zone. This place was reached on December 9. On December 17, I returned up the valley a short distance, crossed the river and ascended the Aguamiro Valley to the town of Aguamiro, reached the following day, and climbed the escarpment to the high plateau which contains the ruins of the pre-Inca city of Huánuco Viejo. Here I remained until December 25 when I began the return to Huánuco by a circuitous route which crossed the Marañón somewhat higher up and joined

the Higueras Valley at the place where I had left it on the outward journey.

Being unable to find transport across the lowlands to the Pichis River, in the Ucayali drainage, I returned to Cerro de Pasco and down the plateau to Oroya, whence I descended the eastern slope of the mountains into the Chanchamayo Valley. Passing through the town of La Merced, I established headquarters at the Hacienda Pampa Americana on the Río Colorado, a short distance below the town, in the humid tropical zone.

February 26, I began a journey with pack train over an outlying spur of the mountains to the Pichis River which I reached seven days later, continuing my journey by canoe to Puerto Bermúdez the following day. From March 5 to 20, I remained at Puerto Bermúdez, in the humid tropical forest. March 20, I boarded a steam launch bound for Iquitos and reached that destination on March 26 after collecting a very small number of specimens at Orellana and San Enrique en route. From Iquitos I descended the Amazon to Manaos where I obtained passage on a steamer bound for New York, stopping at Pará on the outward journey, and reached Chicago on April 28, 1923.

A detailed description of each of the important collecting stations follows:

Chosica.—April 13–17, 25, 27, 1922. 2,800 feet. Arid tropical. Situated in a narrow valley between barren, rocky hills, with the level bottom-land devoted to gardens and cotton fields. The hills in April were dry and clothed with cacti and other such desert vegetation, but the banks of the river and the irrigation ditches supported thickets of somewhat more luxuriant growth.

Santa Eulalia.—April 18–24. 3,500 feet. Arid tropical. Similar to Chosica but slightly higher in elevation and better wooded. Much of the valley floor was occupied by orchards of oranges, soursops, guavas, and such fruits, though the desert vegetation persisted on the hillsides. Many Inca ruins were scattered about the valley and numerous terraces of ancient construction were still in good repair on the hills.

Vitarte.—April 27. 1,300 feet. Arid tropical. A cotton and sugar cane plantation between Chosica and Lima. Not radically different from Chosica.

Matucana.—April 28–May 4. 7,700 feet. Arid subtropical. Hereabouts the valley is narrow and the hillsides very steep and

rugged, but the cloud line is much closer and the countryside accordingly greener. The snow line, also, is closer and the air much cooler and fresher than at Chosica. Several cold mountain streams rush down from the heights and have their banks overgrown with vines and bushes where they are not occupied by boulders, but the steep slopes of the adjacent hills are covered with cacti and similar plants.

Cerro de Pasco.—May 5–7. 14,419 feet. *Puna* zone. High, grassy plains above timber line.

La Quinua.—May 8–16. 12,100 feet. Humid temperate. Just below timber line. Scattered patches of gnarled and twisted trees occupy the heads of the canyons, with more bushy growth along the river banks and grassland on the hilltops. Frost and cold rain or hail were daily occurrences.

Huánuco.—May 19–30, July 31–August 11, November 23–December 4, and December 29, 1922–January 12, 1923. 6,600 feet. Semiarid subtropical zone. The town lies on the banks of the Huallaga River in a broad valley surrounded by hills reaching upward to the *puna* zone. The valley floor is very fertile but the near-by hillsides, at the lower elevations, are dry and barren or set with cacti and other desert plants. In May and August the climate was dry and hot during the daytime, though cool at night; in November the rainy season was imminent while at the close of December it was on in full force, and the once dry hillsides were green and flourishing while much of the lowland was boggy. When not qualified by other stated elevations, the locality "Huánuco," as used in the following pages, means this locality or the near-by Hacienda Dispensa which is mentioned below.

Huánuco (Schizmay).—May 30–June 17. 10,500 feet. Semiarid temperate and semiarid subtropical. This designation marks a camp on the slopes of the mountains near Huánuco at the given elevation. It proved to be excellent collecting ground. It lies on the northern slope of the hills with a high, rocky ridge to the eastward and one to the westward, with high peaks at the back from which a small stream tumbles down the slope to the Huallaga River. The hillsides are grassy, where not cultivated, and are provided with patches of scattered woodland. Along the stream and its affluents are dense tangles of bushes and trees interlaced with rattans, blackberry vines, and other creepers. The climate was warm at midday, considerably colder at night with occasional frost, and rains were frequent though not of long duration. The region may be classed, in general, as

semiarid or even humid temperate with finger-like projections of the humid subtropics extending upward along the streams from the lower elevations.

Huánuco (*Pagancho*).—June 17–30. 12,200 feet. Humid temperate. This region was cold and bleak. The temperature often remained below 50° F. in the middle of the day and dropped below freezing at night. Rain and hail were of almost daily occurrence and the fog, which settled in the lower valleys at night, began to lift at sunrise and often blanketed the hills until nearly noon. The mountain tops near-by are at an elevation of about 14,000 feet and are rocky and barren of all but a few patches of grass, though the hollows and pockets at the heads of the ravines support a growth of gnarled and stunted trees, draped with moss and creepers and saturated with moisture from the nightly fogs. These pockets are full of pitfalls for the unwary foot, with many crevices between the rocks concealed by moss and precariously bridged by rotting logs, but they furnish a home for many species of birds not found elsewhere. Some of the deeper hollows hold an alpine lake of icy water rimmed with black cliffs and emptying over the lower side or through a fissure in the rocks. An occasional bog marks the origin of one or other of the numerous brooks. The hillsides near camp were clothed with grass and bushes and an occasional tree.

Panao (*Mt. Pukagaga*).—July 2–18. 10,300 feet. Humid temperate and subtropical. Not unlike the mountains near Huánuco at 10,500 feet, but less arid and with a more pronounced subtropical tendency. The river is larger than that at Schizmay, and is bordered by heavier woods, with numerous tree-ferns and solid jungles of rattan at several places. Temperate zone forest occurs in detached areas on the upper slopes of the mountains, alternated with grassland and extensive patches of ferns. Though not immediately adjacent to the town of Panao, this collecting site is in the same extensive valley and at about the same elevation, though on a different slope.

Huánuco (*Hacienda Dispensa*).—July 20–31. 6,400 feet. Semiarid subtropical zone. A hacienda between Valle and Huánuco on the banks of the Huallaga River. The conditions are equivalent to those at the town of Huánuco, 200 feet higher in elevation, except that they are less disturbed by human activities. There is a fringe of woodland along the river with a few beds of cat-tails and an extensive jungle of giant *Equisetum* ten or twelve feet high.

Cultivated fields in the bottom of the valley and dry, cactus-covered hillsides complete the picture. Since the region is identical with Huánuco in its faunal conditions, I have not attempted to segregate the records from this locality, although they may sometimes be recognizable by the dates.

Vista Alegre.—August 15–September 1, October 8–20. 4,100 feet. Subtropical zone. The coca plantation of this name lies on the right bank of the Chinchao River a little above its junction with the Huallaga River. Above the hacienda the hills reach upward through the subtropical zone with alternating grassland and dry woods; below and across the river is the tropical forest. Although most of the species of birds found here are subtropical forms, numerous tropical species occur here also since the forest on the right bank of the river is continuous with that on the left bank and the river does not form an effective barrier. The climate is hot and humid, without much relief at night.

Huachipa.—September 2–7. 2,800–4,600 feet. Humid tropical. The camp at this place was within the edge of the tropical forest beyond the large clearing of Huachipa plantation. Though higher than Vista Alegre it is in sight of that place across the river. The bottoms of the deep canyons are nearly two thousand feet below, and collecting was done throughout the region. The plantation clearing furnished a modification of territory as did the second growth springing up at the edge of the woods, but the basic collecting ground was the heavy, dark, gallery forest, varied here and there by denser second growth where a fallen tree had permitted the entrance of a little sunlight. Vines, rattans, epiphytes, and parasitic growths were numerous and bird life was abundant. Many of the so-called vagabond troops were found and followed with profit—large flocks of mixed species, from the terrestrial ant-wrens to the arboreal tanagers and a host of others between, patrolling the woods and searching the vegetation minutely from top to bottom. Whereas various tropical species common at Huachipa were found sometimes at Vista Alegre, there were but few species of the subtropical zone (such as *Elaenia pallatangae* and *Myiarchus tuberculifer atriceps*) which had found their way across the river to the clearings on the Huachipa side. The climate at Huachipa was more uncomfortable than at Vista Alegre, being more enclosed and with less movement of air.

Chinchao (*Hacienda Vilcabamba*).—October 21–November 20. 5,700 feet. Subtropical zone. The immediate vicinity of the hacienda

is similar to Vista Alegre without the tropical zone incursions, but there is a reversed influence from the cloud forest that tops the near-by hills. At the season of my visit, the rains were beginning in earnest and the steep hillsides of the hacienda were perpetually deluged so that there was little distinction between humid and arid regions except in the density of the vegetation. Collecting was done in both types of country.

Cullcui (Marañón Valley).—December 9–17. 10,400 feet. Arid subtropical zone. A tiny settlement on the right bank of the Marañón bounded by steep dry hills. Cactus, agave, and similar desert plants are in preponderance, even along the banks of the river where they form impenetrable thickets. A small tributary entering the Marañón, a short distance below the settlement, has developed a more luxuriant growth of bushes, trees, and grass that forms a humid oasis in the desert. The faunal affinities of the region are to the western slope of the coastal range and a number of species of birds are common to Cullcui and Matucana, though the latter locality is less arid than Cullcui.

Huánuco Viejo.—December 18–25. 12,700 feet. *Puna* zone. The locality is above timber line on a broad plateau with a few rounded peaks rising a little above it. It is covered with grass and watered by a little stream which finds its origin in an extensive marsh, not far from the ruins of the ancient settlement. The climate was continuously cold and wet.

Río Colorado (Chanchamayo Valley).—January 25–February 26, 1923. 2,300 feet. Humid tropical zone. Mixed forest and cultivated fields. At the time in question the rainy season was well advanced and every gully was a running stream while many level areas were inundated. Though in the Ucayali drainage, the Chanchamayo Valley is closer in faunal affinities to the tropical Huallaga valleys than to the Upper Amazonian area of northeastern Perú and the upper Ucayali River.

Puerto Bermúdez.—March 5–20. 1,100 feet. Humid tropical zone. Upper Amazonian region. This locality is at the head of steamer navigation during the rainy season and above it during the dry season. When I visited it, the region was extensively inundated and difficult for collecting. Except for small cultivated clearings, the countryside is heavily forested with considerable undergrowth along the banks of the river and at the edges of the fields. The faunal affinities are with the Upper Amazonian region and some of

the subspecies found at Puerto Bermúdez occur also on the Río Solimoës in Brazil.

It is impossible to name the numerous persons whose thoughtfulness and kindness smoothed the difficulties of the expedition's work in a foreign country, but to all of them I am grateful for their services. To Mr. Marshall Field, whose generosity made the expedition possible, and to Mr. H. B. Conover, who supplied a portion of the funds in return for some of the game-birds obtained on the trip, I am grateful for the opportunity given to study the Peruvian bird life in the field. To the government of Perú and its various officials I am grateful for the courtesy and assistance granted in entering the country and exploring its zoological riches. In studying the collection since my return I have been indebted to Dr. Frank M. Chapman, of the American Museum of Natural History, New York; Mr. W. E. C. Todd, of the Carnegie Museum, Pittsburgh; Mr. O. Bangs, of the Museum of Comparative Zoology, Cambridge; Dr. Witmer Stone, of the Academy of Natural Sciences, Philadelphia; and Drs. A. Wetmore, H. Friedmann, and Charles W. Richmond, of the United States National Museum, Washington, for the loan of a large amount of comparative material from the collections under their charge, without which this report would not have been possible. Many thanks are due also to Dr. Charles E. Hellmayr of Field Museum of Natural History for much helpful comment and criticism and for comparative notes on many specimens in European museums and references to obscure or inaccessible publications.

The systematic arrangement in the following pages may seem somewhat confused inasmuch as I have not followed any single author. There is no check list of neotropical birds which is both complete and strictly modern. Consequently I have largely followed Wetmore (Proc. U. S. Nat. Mus., **76**, Art. 24, 1930) for the sequence of orders and families (not separately shown in the text); Simon (Histoire Naturelle des Trochilidae, 1921) for the genera of Hummingbirds; Hellmayr (Field Mus. Nat. Hist. Publ., Zool. Ser., **13**, pts. 3–6, 1924–1929) for the Mesomyodian (or Tyrannine) Passeriformes; Berlepsch (Ber. V. Int. Orn.-Kongr., pp. 1001–1161, 1912) for the Tanagers (excluding certain genera which I think belong to the Finches); and Brabourne and Chubb (Birds of South America, 1913) when better authority is not available.

The adopted scheme is not without its disadvantages and certain inconsistencies may be noted such as among the Finches where the genera most nearly related to the Tanagers will be found in a position

farthest removed from them. However the present paper is too limited in scope to warrant an attempt at reclassification on a large scale to rectify such errors.

The present repository of the type specimens of the various species and subspecies, so far as I have been able to ascertain the facts, have been given at the close of each original reference.

In the following descriptions, capitalization of the names of colors indicates direct comparison with Ridgway's Color Standards and Color Nomenclature.

?Crypturellus soui nigriceps (Chapman).

Crypturus soui nigriceps CHAPMAN, Amer. Mus. Novit., 96, p. 1, 1923—Upper Río Suno, e. Ecuador; Amer. Mus. Nat. Hist.

A female from Vista Alegre, August 24, 1922 (in collection of H. B. Conover).

Compared with thirty-six additional specimens in Field Mus. Nat. Hist. and Conover coll., belonging to a number of races, from Chanchamayo, Perú; Buenavista, Santa Cruz, Bolivia; Vaqueria, Jiminez, Milagro, and Puente de Chimbo, Ecuador; Vista Nieve, Santa Marta, Colombia; Utinga and Murucutú, Para, and Ayupaya and Rio Manacapurú, Amazonas, Brazil; British Guiana; Colón, El Banco, Boquete, and Old Panamá, Panamá; Lagarto, Buenos Aires, Las Aguas, and Las Cañas, Costa Rica; Chapulco, Guatemala; and San Pedro Sula, Honduras.

I have not been able to arrange all of this material satisfactorily in the limited time I have been able to devote to it. Suffice it to say that the Vista Alegre bird appears to agree best with Chapman's description of *nigriceps*, although in the absence of specimens from eastern Ecuador I am not sure that it is properly referable to that form. The Bolivian bird probably is *hoffmannsi* and is much brighter in ventral coloration than my Vista Alegre specimen, though the upper parts are much the same. The Chanchamayo specimen, being a male, is not strictly comparable to the Vista Alegre female, from which it differs by less blackish crown, lighter brown back, and paler belly; it may not be fully adult. Until I have seen more material from Perú, I must let the identification of the present specimens remain more or less in doubt.

?Crypturellus obsoletus ochraceiventris (Sztolcman).

Crypturus obsoletus ochraceiventris SZTOLCMAN, Ann. Zool. Mus. Pol. Hist. Nat., 5, (4), p. 199, 1926—La Gloria, Chanchamayo, Perú; Warsaw Mus.

A male from Chinchao, November 14, 1922 (in collection of H. B. Conover).

Compared with a male and female of *obsoletus* from Fazenda Cajoa, São Paulo, Brazil; a male from São Paulo; an unsexed skin from Rio Grande (do Sul); three males and three females from Misiones, Argentina; a male of *cerviniventris* from La Azulita, Venezuela; and two males and three females of (?)*punensis* from Incachaca, Cochabamba, Bolivia (all but the female of *obsoletus* in Conover collection).

With this material it is impossible to be certain of the identity of the Peruvian and Bolivian birds. Chubb's description of *punensis* gives little positive information and Sztolcman's description of *ochraceiventris* compares that form with *obsoletus* without showing how it differs from *punensis*, its geographically nearest ally. Chubb (Ibis, 1919, p. 8) recorded *punensis* from Chulumani, Bolivia, and Sztolcman had three Chulumani skins for comparison, which he also called *punensis*, so it is to be assumed that *ochraceiventris* shows certain differences from the west-Bolivian skins.

The Incachaca specimens at hand are darker and deeper in coloration than the skins of *obsoletus*, and are more richly colored, though above they are rather overlaid with dark gray. In these respects they answer Chubb's description of *punensis*, although they are not smaller than the Brazilian skins of the same sex. The Chinchao bird is a little deeper and richer below than the Bolivian specimens, while above it is decidedly more rufescent than either the Bolivian or Brazilian examples and has no trace of vermiculations on the back, thus agreeing, so far as can be determined, with the description of *ochraceiventris*, though the belly is not as ochraceous as it is in the Bolivian and Brazilian birds; in size it agrees best with the description of *punensis*.

If the Incachaca birds represent typical *punensis*, the Chinchao specimen may be separated as *ochraceiventris;* it certainly is not Sztolcman's *chirimotanus*. On the other hand it is not certain that *ochraceiventris* and *punensis* are recognizably distinct, due to the failure of the respective authors to furnish sufficient information concerning the two supposed forms. Since Chinchao is nearer to the type locality of *ochraceiventris* than to Oroya, Puno, Perú, the type locality of *punensis*, I must refer my specimen to *ochraceiventris* until such time as the relationship of these forms can be satisfactorily explained.

Nothoprocta curvirostris Sclater and Salvin.

Nothoprocta curvirostris SCLATER and SALVIN, Nom. Av. Neot., pp. 153, 163, 1873—Calicali, Ecuador; British Mus.

A female from the mountains near Huánuco, 10,500 feet, June 12, 1922 (in collection of H. B. Conover).

Compared with five males and seven females from the Páramo de Pichincha, Mt. Corazón, Quito, and the Cochaseca Range, Ecuador (Conover coll.).

The Peruvian bird is browner, less blackish, on the back and top of the head and has the flanks a little more deeply colored than the Ecuadorian specimens. The upper throat is without blackish hair lines and has buffy central spots margined with whitish, but several of the Ecuadorian birds are similarly marked in contrast to the others.

Anhima cornuta (Linnaeus).

(*Palamedea*) *cornuta* LINNAEUS, Syst. Nat., ed. 12, 1, p. 232, 1766—based on MARCGRAVE'S "Anhima"; Brazil.

A young female from San Enrique, lower Ucayali River, March 25, 1923.

Compared with a young female from British Guiana and a female from Encontrados, Zulia, Venezuela.

Anas cristata alticola Ménégaux.

Anas cristata alticola MÉNÉGAUX, Bull. Soc. Philom. Paris, **10**, p. 224, 1909—Lake Poopo, Bolivia; Paris Mus.

Two males and a female from Huánuco Viejo, December 21, 1922 (one male and the female in collection of H. B. Conover).

Compared with three males and two females from Junín (two in Amer. Mus. Nat. Hist.); a male from Machu Picchu (U. S. Nat. Mus.); two females from El Cumbre, Bolivia (Amer. Mus. Nat. Hist.); and a male and female from Laguna de Taxara, Tarija, Bolivia (Conover coll.); also with eight specimens of *cristata* from Chubut, Arroyo Verde, Deseados, and Río Gallegos, Argentina (seven in Conover collection).

The specimens referred to *alticola* are larger than the series of *cristata* (wing, males, 285–309 mm. as compared with 252–266 mm.), and have the throat rather less purely whitish and the breast less clearly spotted. Peruvian birds from Junín and northward may be somewhat more deeply rufescent on the breast than the Bolivian specimens but the difference is not striking; judging by the individual

variation shown in the series of *cristata*, it may not be constant. A larger series of topotypical *alticola* would be desirable before attempting to separate a northern race on this character.

Nettion flavirostris oxypterum (Meyen).

Anas oxyptera MEYEN, Nov. Act., **16**, Suppl., p. 121, pl. 26, 1833—southern Perú.

A male and two females from Huánuco Viejo, December 20 and 21, 1922 (the male and one female in collection of H. B. Conover).

Compared with a female from Junín, Perú; two males and a female from Tiraque, Cochabamba, and a male and a female from Laguna de Taxara, Tarija, Bolivia; a male from Río Loa, Antofogasta, Chile; and a male and female from Laguna Blanca, Catamarca, Argentina; also with seven males and five females of *flavirostris* from Neuquen and Mendoza, Argentina, and Chiloe Island, Chile (all specimens in Conover collection).

The series of *oxypterum* is lighter in dorsal coloration and has the pectoral spotting less heavy than in *flavirostris*. The general characters are too nearly alike in both forms to leave much doubt as to their specific affinity.

Merganetta armata leucogenis (Tschudi).

Anas leucogenis TSCHUDI, Arch. Naturg., **9**, (1), p. 390, 1843—"in Antibus elevatis," Perú; Mus. Neuchâtel.

A male from Panao, July 6, 1922; the skin of a young bird purchased at Huánuco Viejo in December, said to have been shot locally within the month (both skins in collection of H. B. Conover).

Compared with a female from Molinopampa; also with a male of *garleppi* from Tarija, Bolivia; a male and female of *frenata* from Río Nireguao, Chile; two males of *armata* from Coquimbo, Chile, and Neuquen, Argentina; and two males and a female of *columbiana* from Río San Pedro, Ecuador, and the Mérida region of Venezuela (all but the Moyobamba specimen of *leucogenis* in Conover collection).

Phillips (Nat. Hist. Ducks, **4**, p. 223, 1926) has pointed out the variations shown by a number of specimens from Junín (Amer. Mus. Nat. Hist.) and suggests that if this variation is individual it points to the probability that the torrent ducks are only subspecies of a common species. This I believe to be the correct interpretation of the relationships among the various forms of this group. Phillips's

distributional map shows the ranges of *armata* and *garleppi* to overlap but this must be an error since these forms are not known to occur together. No details are given, since the two forms are treated by Phillips as full species.

The immature plumage of *leucogenis* seems not to have been described and the following account of the young bird purchased at Huánuco Viejo may be interesting. This specimen is white below, slightly ochraceous on the throat, and crossed on the foreneck with a band of deep ochraceous buff; sides of the breast and flanks strongly banded with black and white; crown vermiculated with blackish gray and white on a gray ground; sides of neck grayish white, indistinctly barred with blackish gray; mantle and scapulars dull black, broadly margined with brownish gray, somewhat ochraceous on the longest scapulars; lower back and rump gray, barred with narrow white lines; tail dull brownish gray, edged and marked diagonally with indistinct whitish lines; tips of shafts conspicuously ivory white; wing quills not developed; upper wing-coverts bluish gray with broad white tips on the greater series, forming a transverse band; spur undeveloped, consisting merely of a short, rounded knob; maxilla bluish black with whitish tip (mandible missing).

Examples of this handsome duck were seen on the upper Marañón River in several places and gave interesting exhibitions of their marvelous powers of diving. The Panao bird was one of a pair found in the rocky rapids of a small stream that descended the mountain side at that locality. I retrieved the male by going into the water after him as he was floating swiftly past, but the female (apparently wounded) rode to safety and was downstream before I could reach her.

Accipiter erythronemius ventralis Sclater.

Accipiter ventralis SCLATER, P. Z. S. London, 1866, p. 303—Nova Granada interior; Gurney collection, Norwich Mus.

A female from Chinchao, November 2, 1922.

Compared with a young male from Bogotá, Colombia; also with a female of *salvini* from Páramo de Tamá, Colombia, and two males and four females of *erythronemius* from Concepción, Tucumán, Argentina.

The rufescence of the under parts in the Chinchao bird is largely confined to a broad stripe on each side extending from the base of the bill through the malar region and down the sides and flanks,

becoming deeper posteriorly and culminating in the deep rufescent thighs. The throat and breast are lightly washed with rufescent; the belly and crissum are white.

The three forms mentioned, *salvini*, *erythronemius*, and *ventralis*, appear to belong to the same specific group. Stresemann (Journ. Orn., **72**, p. 436, 1924) has added *velox* and several additional forms and placed them all under *nisus*, but I am not prepared to go so far at present.

Buteo platypterus platypterus (Vieillot).

Sparvius platypterus VIEILLOT, Tabl. Ency. Méth., 3, p. 1273, 1823—near Philadelphia, Pa.

A female from the Río Colorado, Chanchamayo Valley, February 6, 1923.

Compared with three Bogotá skins and a series from North and Central America.

?Buteo brachyurus Vieillot.

Buteo brachyurus VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., 4, p. 377, 1816—Cayenne.

A male from Panao, July 16, 1922.

Compared with two males from Florida; also with numerous skins of *B. platypterus* and *B. lineatus*.

I am not entirely satisfied with my identification of this specimen since it does not match any description which I can find. In size and the various proportions of wing, tail, primaries, etc., it comes close to *brachyurus*, as it does in the coloration of the upper parts. Below there is a broad stripe of dark rufescent brown from the sides of the breast to the lower flanks, with some narrow brown streaks on the sides of the abdomen; the throat and median breast and abdomen are pure white. The tail is dark grayish brown above, crossed by eight or ten rather indistinct dusky bars. Until identification is more certain the specimen may be referred here with a query.

The stomach of the Panao bird contained the remains of a *Turdus* (*fuscater gigantodes?*).

Geranoaëtus melanoleucus australis Swann.

Geranoaëtus melanoleucus australis SWANN, Synop. Accip., ed. 2, 2, p. 67, 1922—Valle de Lago Blanco, Chubut, Patagonia; British Mus.

A female from Cullcui, Marañón River, December 13, 1922.

Compared with a nearly adult male from Río Nireguao and an immature male from Limache, Valparaiso, Chile; also with a female from Aconquija, Tucumán, Argentina, and a young male from Quebrado de los Cuervos, Uruguay, probably referable to typical *melanoleucus*.

The Río Nireguao specimen is the only one of the series that appears to show the definite characters of any supposed form of this species. The skins from Limache, Chile, and from Uruguay are quite immature and useless for comparison until detailed studies have been made by someone with enough material to determine the characters of the young birds. The Río Nireguao bird is quite boldly barred on the belly and flanks and is large, and evidently belongs to *australis* as characterized by Swann. The Cullcui specimen also is barred but much less pronouncedly. It falls within the range of measurements given for the females of *australis*, having a wing length of 532 mm. and thereby is too large to belong to *meridensis* which Swann believed might be the form inhabiting Perú. The Aconquija female is even less strongly barred than the Cullcui example but it certainly does not have the belly unqualifiedly "white," as was indicated by Swann to be the case in typical *melanoleucus*. It evidently is intermediate between that form and *australis*. No one appears to have had sufficient material to date to give a thorough account of the variations and distribution of this group.

Rupornis magnirostris occidua Bangs.

Rupornis magnirostris occidua BANGS, Proc. Biol. Soc. Wash., **24**, p. 187, 1911—Río Tambopata, e. Perú; Mus. Comp. Zool.

A male from Chinchao, October 25, 1922.

Compared with a male from Lagunas and three females from Yurimaguas, Rioja, and San Ramón, Perú; also with a number of skins of *magnirostris* from British Guiana; Bõa Vista, Brazil; Orope, Zulia, Venezuela; and Cucuta, Colombia; and with *nattereri* from Quixada, Ceará; São Bento, Maranhão; and Tury-assú, Maranhão, Brazil.

No two of the Peruvian birds are exactly alike, but all apparently belong to the same form, which is intermediate between *nattereri* and *magnirostris*. Hellmayr [Arch. Naturg., **85**, A, (10), p. 129, 1920] includes the whole of Perú in the range of *occidua* after examination of a larger series than I have before me.

Ibycter megalopterus megalopterus (Meyen).

Aquila megaloptera MEYEN, Acta Acad. Caes. Leop. Carol. Nat. Cur., **16**, suppl., p. 64, 1834—highest regions of the cordilleras, Chile; Berlin Mus.

Two males (one immature) from Panao, July 8 and 17, 1922.

Compared with an adult male from Macate and an adult male, a young male, and a young female from Junín, Perú; also with four adults and two young of *carunculatus* from Antisana, Ecuador.

The three adult Peruvian birds show an interesting progression in the direction of *carunculatus*. The Junín specimen has the breast uniform black and two outer primaries with broad white tips. The Panao bird, from farther north, has faint indications of pale terminal or subterminal spots on the lower breast and has white tips on three outer primaries (with indications of white tips on the others). The Macate specimen has quite distinct, though small, whitish spots on the lower breast and has five outer primaries with distinct white tips. The Ecuadorian specimens of *carunculatus* have all the primaries tipped with white and the whole breast and the flanks with large white subterminal spots, and average larger than *megalopterus* although the extremes overlap in size. The general characteristics of curly crest, black back, white-tipped secondaries (broader in *carunculatus*), white upper tail-coverts and lower rump, and other features, found in both forms, leave no doubt that these birds are representatives of the same group. Probably *albogularis* belongs to the same group although I have no specimens from which to form a clear judgment.

The species was known locally as "Dominico." It was most commonly seen on the ground. The young bird had its stomach full of angleworms.

Cerchneis sparveria peruviana Cory.

Cerchneis sparverius peruviana CORY, Field Mus. Nat. Hist. Publ., Orn. Ser., **1**, No. 8, p. 296, 1915—Chachapoyas, Perú; Field Mus. Nat. Hist.

Two males and a female from Huánuco, May 22, August 4, and August 6, 1922; a male from the mountains near Huánuco, 10,500 feet, June 8; a male from Vista Alegre, August 16; two males from Cullcui, Marañón River, December 12 and 16.

Compared with the type from Chachapoyas and five males from Macate, Hacienda Limón, Mirador, and Menucucho, Perú; also with a male of *cinnamomina* from Río Nireguao, a male from Puerto Montt, a male from Lake Gualletue, Province of Cautin, and a male and female from Riñihue and Mafil, Province of Valdivia, Chile.

The Peruvian birds are separable from *cinnamomina* as a whole by more ochraceous less cinnamomeous breast and a tendency toward the reduction of the black barring on the back. The series is far from uniform. The type, one male from Huánuco, and the bird from the mountains near Huánuco are the most heavily barred on the back, being about like the males of *cinnamomina* in this respect. Four other birds are more or less intermediate between these and the Vista Alegre and Cullcui skins, which are lighter rufescent on the back with the barring obsolete. These last three birds differ among themselves in turn. The Vista Alegre specimen has no streaks on the breast while the two Cullcui examples are the most heavily streaked of all the Peruvian series. The streaks on the breast are rather pronounced in the Macate bird and the two Huánuco males, but obsolete in the others. The Vista Alegre bird, moreover, has the black subterminal bar on the two middle pairs of rectrices broken in the middle to form two separated spots. One Cullcui and one Huánuco male show a rufescent spot on the occiput lacking in the others, a feature used by Cory as a character of *peruviana;* the spot is present in all of the series of *cinnamomina.*

Apparently *peruviana* is a highly variable form but it is not clear that the material at hand from Perú can be referred, even in part, to any other race, at least until certain distributional problems are solved.

Penelope jaqúaçu jaqúaçu Spix.

Penelope jaquaçu SPIX, Av. Bras., 2, p. 52, pl. 68, 1825—"in sylvis fluminis Solimoëns"; Munich Mus.

A female from Vista Alegre, August 24, 1922 (in collection of H. B. Conover).

Compared with a female from Chanchamayo and a male from Lagarto Yacu, Ecuador; also with a male and female of *speciosa* from Buenavista, Santa Cruz, Bolivia (Conover collection).

The three Peruvian and Ecuadorian birds are rather uniform in coloration and size. Since Hellmayr [Abh. K. Bayer. Akad. Wiss., 2 Kl., **22**, (3), p. 688, 1906] has compared a Chanchamayo specimen with the type of *jaqúaçu* and found them to be indistinguishable, it is apparent that the Vista Alegre bird is referable to the present form. The Bolivian *speciosa* (=*boliviana* auctorum, nec Reichenbach) appears to be only subspecifically distinct.

The Vista Alegre bird was named "Pukakunga" by the natives.

Ortalis guttata guttata (Spix).

Penelope guttata SPIX, Av. Bras., 2, p. 55, pl. 73, 1825—"ad flumen Solimoëns"; Munich Mus.

A female from Vista Alegre, August 24, 1922; a male from Chinchao, October 25 (both in collection of H. B. Conover).

Compared with three males and a female from Río Catapino and Concepción, e. Ecuador (Conover collection); a Bogotá skin, apparently referable to *guttata;* and a male of *albiventris* from Macaco Secco, Brazil.

The two Peruvian birds have the forehead distinctly gray and a more or less pronounced superciliary stripe also gray, while the whitish tips on the pectoral feathers are uniformly broad, without much indication of a restricted spot of purer white in the center; in these respects they differ from the average of the Ecuadorian series. However, one of the Ecuadorian birds has the gray forehead and superciliary stripe and another has the broadly and evenly margined pectoral feathers, showing that these characters are not restricted to the Peruvian examples. The Ecuadorian birds, on the other hand, have the ground color of the breast and lower throat somewhat blacker than the Peruvian skins. Apparently there is not a very close approach toward the characters of the Urubamba specimens which Chapman (Bull. U. S. Nat. Mus., **117**, p. 44, 1921) refers to *adspersa.* Taczanowski (Orn. Pér., **3**, p. 279, 1886) points out differences between specimens from central Perú, which must be typical *adspersa,* and others from southern Perú, which should be like the Urubamba birds, and my two examples do not agree with the characteristics assigned to either series. A number of specimens from various parts of Perú will be necessary to determine the limits of distribution and of individual variation in whatever forms may be found to inhabit the country. Meanwhile I can not satisfactorily separate my specimens from east-Ecuadorian birds which Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 155, 1926) identifies with typical *guttata.*

Psophia crepitans leucoptera Spix.

Psophia leucoptera SPIX, Av. Bras., 2, p. 67, pl. 84, 1825—Rio Negro, errore [cf. HELLMAYR, Abh. K. Bayer. Akad. Wiss., 2 Kl., 22, (3), p. 709, 1906]; Munich Mus.

A female from Puerto Bermúdez, March 7, 1923 (in collection of H. B. Conover).

Compared with three males and two females from Parana de Tacaré, Amazonas, and a female from Ayaguia, Rio Purús, Amazonas, Brazil; also with a female of *ochroptera* from Manacapurú, Rio Solimoës; two females of *obscura* from Rio Cumarapy and Utinga, Para; five females of *crepitans* from Monte Alegre, Para, Brazil and Essequibo River, British Guiana; and a female of *napensis* from Guamayacu, Ecuador (all but one female of *crepitans* in collection of H. B. Conover).

The various forms of *Psophia* replace each other geographically and appear to form but one specific group. The characteristics of each race are suggested in the variations of the others.

Pardirallus sanguinolentus tschudii Chubb.

Pardirallus rityrhynchus tschudii CHUBB, Ibis, 1919, p. 50—Lake Junín, Perú; British Mus.

Three males and four females from Huánuco, July 23–30, 1922 (five in collection of H. B. Conover).

Compared with three young males from Cajamarca, Perú; also with three males and two females of *sanguinolentus* from Tunuyan (Mendoza) and Burruyain, San Felipe, and Río Colorado (Tucumán), Argentina.

The Peruvian birds differ from the Argentine specimens by their darker coloration above and below; both series show semi-concealed black spotting on the lower back, which may be a little more conspicuous in the Argentine series because of the slightly lighter color of the tips of the feathers.

I use the name *sanguinolentus* for the Argentine specimens because the earlier name *rytirhynchus* of Vieillot is unidentifiable. Vieillot based his name on Azara's description of three apparently young birds from Paraguay which, among other characters, had a white stripe from throat to crissum and had bills measuring 35½ lignes =80 mm. Neither character seems to apply to the species long identified with the description and even if the three birds (which Azara says were all alike) were abnormal specimens of some rail of the present genus, there is no evidence that they were not of the species named *nigricans* by Vieillot, based on adults also described by Azara from Paraguay. Swainson's species, *sanguinolentus*, was said to be from "Brazil and Chili" but the type, now in the Museum of Comparative Zoology, Cambridge, is labeled "Brazil" and has been examined by Dr. Hellmayr who informs me that it is identical

with *rytirhynchus* auctorum. In view of the uncertainty surrounding Vieillot's name *rytirhynchus*, it is preferable to use the Swainsonian name.

These interesting birds (*tschudii*) were common at the Hacienda Dispensa, below Huánuco, in the jungles of reeds and *Equisetum* near the river. Their extraordinary song was heard much more often than the birds were seen. The most common utterance began with a low hum, something like the starting of a dynamo, repeated two or three times with a successive increase in pitch and with the last one sliding into a cackled, "ka-wheet, ka-wheet, ka-wheet" or "cha-gweet, cha-gweet" with a deep, choking undertone, "ug, ih-hug, ug, . . ." accompanying it. Another expression was a long drawn "oh . . . chuck-a-chuck-a-chuck-a-chuck . . . ." The alarm note was a sharp "chick."

Creciscus viridis (P. L. S. Müller).

Rallus viridis P. L. S. MÜLLER, Natursyst. Suppl., p. 120, 1776—based on DAUBENTON, Pl. Enl. 368; Cayenne.

Crex facialis TSCHUDI, Arch. Naturg., **9**, (1), p. 388, 1843—Perú (probably Chanchamayo); young bird; Mus. Neuchâtel.

Creciscus viridis subrufescens BERLEPSCH and STOLZMANN, P. Z. S. London, 1902, p. 49—La Merced, Chanchamayo, Perú; Warsaw Mus.

A male and female from Huachipa, September 27 and October 7, 1922; a female from Hacienda Buena Vista, Río Chinchao (collected by E. Heller), September 8 (the Huachipa female and the Hacienda Buena Vista skin in collection of H. B. Conover).

Compared with a skin from the Carimang River, British Guiana; two females from Fazenda Inhuma, Alto Parnahyba, Maranhão, Brazil; and two males and two females from Manacapurú, Amazonas, Brazil (all in Conover collection); and with a Bogotá skin and a female from Ponto (Canella), Maranhão (Field Mus. Nat. Hist.).

I am unable to recognize any racial distinctions in this material. The characters given by Berlepsch and Stolzmann for *subrufescens* may be found scattered through the series. From no region are the specimens uniform and no characters can be found to distinguish any geographic units, even variable ones, without the characters reappearing in individuals from other localities. I believe that the species must be considered as a highly variable one without clearly marked races.

My Huachipa birds were found on a dry hillside at the edge of the tropical forest in a dense thicket of second-growth saplings.

Eurypyga helias helias (Pallas).

Ardea helias PALLAS, Neue Nord. Beytr., 2, p. 48, pl. 3, 1781—Surinam.

A female from Orellana, lower Ucayali River, March 24, 1923.

Compared with a male from British Guiana and two males and a female from Serra da Lua, Brazil; also with a male of *major* from near San Pedro Sula, Honduras.

The Peruvian specimen clearly belongs to the typical race although it differs from the other specimens by lacking all trace of a rufous spot on the outer primary.

Jacana spinosa peruviana subsp. nov.

A female from Masisea, lower Ucayali River, March 22, 1923.

Compared with the material listed below.

Type from Masisea, lower Ucayali, Perú. No. 2797, collection of H. B. Conover, Chicago. Adult female collected March 22, 1923, by J. T. Zimmer. Original number 3541.

Diagnosis.—Similar to *J. s. melanopygia* from western Venezuela but larger and with rump, upper tail-coverts, tail, and belly less blackish, more purplish. Differs from *J. s. intermedia* from the north coast of Venezuela by larger size and by having the back, upper tail-coverts, tail, and flanks darker. Back, tail-coverts, tail, and flanks very much darker than in *jacana*.

Habitat.—Lower Ucayali River, Perú (possibly adjacent parts of upper Amazonia).

Description of type.—Head, neck, upper part of mantle, and upper breast greenish black; lower mantle, rump, and scapulars rich Diamine Brown with purplish violet lights; upper wing-coverts like scapulars except for a wide strip along outer border of the wing, including alula and primary-coverts which are sooty blackish; primaries and outer secondaries largely Light Chalcedony Yellow with all of the outer margin of the outermost primary and the terminal portion of the remainder (except the inner ones), the tips, and the distal portion of the inner margins light brown; inner webs of the inner (yellowish) quills with an irregular brownish area at the base; innermost secondaries and tertials like the back on the exposed portions, browner basally; upper tail-coverts and tail Aniline Black with brighter violet lights; belly light Aniline Black with violet lights; flanks like the belly but sides of body under the wings near the border of the rump paler and browner; inner under wing-coverts

Hessian Brown; outer ones Dark Grayish Brown. Iris dark brown; bill yellow; frontal leaf and wattles ox-blood red; alar spines yellow, paler at tips; feet slaty black. Wing, 137 mm.; tail, 48; culmen, 34¾; frontal leaf, 15¼; tarsus 62½.

Remarks.—In spite of the evident distinctness of the present race and the fact that it is cut off from the range of its nearest ally, *melanopygia*, by the region occupied by the very different *jacana*, I would hesitate to describe it from a single specimen were it not for a critical note published by Berlepsch in the Journal für Ornithologie, 1889, p. 320. In this account, Berlepsch identifies a female from Sarayacu, Ucayali River (not far from Masisea) as *melanopygia* with the observation that it differs from Sclater's description of *melanopygia* by having the lower back and upper tail-coverts not black but purplish brown with blackish tips. He further describes it in comparison with "*spinosa*" (=*jacana*) from Rio Grande do Sul, Brazil, and Venezuela, which further shows its similarity to the Masisea specimen, and gives measurements which agree with my example (wing, 138 mm.; tail, 48; culmen, 37; tarsus, 58). It is apparent, therefore, that the Masisea specimen is not an abnormality but a member of a distinct subspecies.

I follow Hellmayr (Field Mus. Nat. Hist. Publ., Zool. Ser., **12**, No. 18, p. 489, 1929) in considering *jacana* and its races as forms of *spinosa*.

Material examined (in Field Mus. Nat. Hist. and collection of H. B. Conover):

J. s. jacana—Surinam: 1?; Paramaribo 1 ♂. British Guiana: Georgetown 1♂ 2♀; Potaro 1♂. Brazil: Serra da Lua 2♀; Quixada 1♂ 1♀; Santa Rita 1♀; Deserto, Piauhy 1♀; Ibiapaba, Piauhy 1♂; São Francisco, Maranhão 1♂; Manacapurú 2♀. Argentina: Concepción, Tucumán 4♂ 1 ♀; Buenos Aires 1 ♂. Paraguay: Villa Rica 3 ♂ 1 ♀.

J. s. intermedia—Venezuela: Aragua, Maracay 2♂ 1♀.

J. s. melanopygia—Venezuela: Encontrados, Zulia 2♂ 2♀; Catutumbo 1♂; Maracaibo 1♀; Río Cogollo 1♂ 1♀.

J. s. hypomelana—Colombia: Bogotá 3.

J. s. peruviana—Perú: Masisea 1 ♀.

J. s. scapularis—Ecuador: Vinces 1 ♂.

Ptiloscelys resplendens (Tschudi).

Charadrius resplendens TSCHUDI, Arch. Naturg., **9**, (1), p. 388—Perú, "in Antium incola"; Mus. Neuchâtel.

Two males and two females from Huánuco Viejo, December 20, 1922 (two in collection of H. B. Conover).

Compared with a male and female from Junín, a male and female from near Leimabamba, and a female from Chachapoyas, Perú; a male from Suaquin, Bolivia; and a skin without sex from Argentina.

The Junín specimens probably are topotypical.

Capella paraguaiae andina (Taczanowski).

Gallinago andina TACZANOWSKI, P. Z. S. London, 1874, p. 561—Junín, Perú; Warsaw Mus.

Two females from the mountains near Huánuco, 12,200 feet, June 26, 1922 (collection of H. B. Conover).

Compared with a female from Junín and a male from near Leimabamba, Perú; a male, two females, and a specimen of uncertain sex of *paraguaiae* from the departments of San José, Rocha, and Minas, Uruguay, and São Bento, Maranhão, Brazil.

The Junín bird is topotypical and the Huánuco specimens agree with it.

These birds were found about the bogs at the headwaters of the streams in the *puna* region.

Actitis macularia (Linnaeus).

(*Tringa*) *macularia* LINNAEUS, Syst. Nat., ed. 12, **1**, p. 249, 1766—based on EDWARDS, Gleanings, pl. 277; Pennsylvania.

A male from Puerto Bermúdez, March 9, 1923 (in collection of H. B. Conover).

Himantopus himantopus mexicanus (P. L. S. Müller).

Charadrius mexicanus P. L. S. MÜLLER, Natursyst. Suppl., p. 117, 1776—Mexico.

A female from Puerto Bermúdez, March 17, 1923 (in collection of H. B. Conover).

Larus serranus Tschudi.

L(arus) serranus TSCHUDI, Arch. Naturg., **10**, (1), p. 314, 1844—Perú (= Jauja; Faun. Per.); Mus. Neuchâtel.

A male from Huánuco Viejo, December 20, 1922.

No material for comparison.

The species was not uncommon on the high plains at Huánuco Viejo and also along the upper stretches of the Marañón River.

Columba albilinea albilinea Bonaparte.

Columba albilinea BONAPARTE, Consp. Av., 2, p. 51, 1854—New Granada; British Mus.

Four males from the mountains near Huánuco, 10,500 feet, June 2–13, 1922 (three in collection of H. B. Conover).

Compared with two skins from Bogotá, a male and female from Santa Elena, Colombia, a male from Hacienda Llagueda, Perú, and a male from Tucumán, Argentina.

The Peruvian birds seem to be indistinguishable from the typical Colombian examples.

Columba plumbea delicata Berlepsch and Stolzmann.

C(olumba) p(lumbea) delicata BERLEPSCH and STOLZMANN, P. Z. S. London, 1902, p. 44—La Gloria, Chanchamayo, Perú; Frankfort Mus.

Columba plumbea propinqua CORY, Field Mus. Nat. Hist. Publ., Orn. Ser., 1, No. 8, p. 295, 1915—Moyobamba, Perú; Field Mus. Nat. Hist.

Columba plumbea andicola CHUBB, Bull. Brit. Orn. Club, 38, p. 32, 1917—Mapiri, n. Bolivia; British Mus.

A male from Huachipa, September 24, 1922 (in collection of H. B. Conover).

Compared with a skin from "Ecuador" (Conover collection); a male from Mindo, Ecuador, and a male (the type of *propinqua*) and two females from Moyobamba; also with a male and an unsexed skin of *pallescens* from British Guiana, and a male, apparently of the same form (Conover collection) from Incachaca, Cochabamba, Bolivia.

The Peruvian and Ecuadorian birds are identical and all agree with the description of *delicata*. This name was proposed obscurely and must have been overlooked by Cory when he described *propinqua*. Chubb (Ibis, 1919, p. 33) received a specimen collected in Chanchamayo and labeled by Berlepsch and Stolzmann "*andicola*" (possibly a name which they originally planned to use instead of *delicata*), and after searching vainly through literature for a publication by Berlepsch and Stolzmann with this name in use, Chubb published a description of it, having two Bolivian specimens in addition, one of which he made the type of the subspecies. The Chanchamayo bird probably was one of the paratypes of *delicata*.

The skin from Incachaca is much darker above and less vinaceous on the belly than the Peruvian birds and agrees best with the two

Guianan skins of *pallescens*, though it is larger than either of them (wing 184 mm. as compared with 165 and 176).

Zenaida auriculata hypoleuca Bonaparte.

Z(enaida) hypoleuca BONAPARTE, Consp. Av., 2, p. 83, 1854—"Pearl Island" (Panamá), errore; probably Guayaquil, Ecuador; British Mus.

Zenaida auriculata pallens BANGS and NOBLE, Auk, 35, p. 446, 1918—Huancabamba, n. w. Perú; Mus. Comp. Zool.

Four males and two females from Huánuco, May 24 and July 20–26, 1922 (five in collection of H. B. Conover).

Compared with six males and two females from Macate, Menucucho, Mirador, Chachapoyas, and Hacienda Llagueda, Perú; also with five males and three females (Conover collection) from Valle de Rojas, w. Ecuador.

The series shows some individual variations but represents a single distinct subspecies. The bird has not been found by recent collectors on Pearl Island and it is supposed that the type was mislabeled. Since the collectors of the type, Kellett and Wood, are known to have worked at Guayaquil, it is presumed that the specimen in question came from that region where the race is known to occur. Chapman (Amer. Mus. Novit., **31**, p. 1, 1922) has noted the facts of the case and the synonymy.

Gymnopelia ceciliae ceciliae (Lesson).

Columba (Chamaepelia) cecilioe (sic) LESSON, Echo du Monde Savant, Jan. 12, 1845, p. 8; (Reprinted papers, p. 729, 1913)—Perú.

Columba (Chamaepelia) anais LESSON, Descr. Mamm. et Ois., p. 210, 1847—Perú.

A male from Santa Eulalia, April 19, 1922; a male from Matucana, April 30 (both specimens in collection of H. B. Conover).

Compared with five males and four females from Macate and a male and female from Hacienda Llagueda, Perú; also with a male (the type) and a female of *obsoleta* from Cullcui, Marañón River and a female from Balsas; and a male of *gymnops* from Puno, Bolivia.

The Matucana and Santa Eulalia birds are virtually topotypical, in all probability, and the Macate birds agree well with them.

Gymnopelia ceciliae obsoleta Zimmer.

Gymnopelia ceciliae obsoleta ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., **12**, No. 4, p. 51, 1924—Cullcui, Marañón River, Perú; Field Mus. Nat. Hist.

A male (the type) and a female from Cullcui, December 12, 1922 (female in collection of H. B. Conover).

Compared with a female from Balsas and with specimens of *gymnops* and *ceciliae* as listed under the latter form.

This race inhabits the arid hillsides, living on the ground among the rocks and desert plants and in the bushes and low trees that line the small watercourses.

Leptotila verreauxi decipiens (Salvadori).

Homoptila decipiens SALVADORI, Atti Accad. Sci. Torino, **6**, p. 131, 1871—Brazil; Turin Mus.

Leptoptila intermedia CHUBB, Bull. Brit. Orn. Club, **38**, p. 17, 1917—Central South Perú-Huiro, Urubamba Valley; British Mus.

Leptotila ochroptera kalinowskii SZTOLCMAN, Ann. Zool. Mus. Pol. Hist. Nat., **5**, (4), p. 201, 1926—Santa Ana, Perú; Warsaw Mus.

Two males and a female from Chinchao, October 24–November 17, 1922; a female from Vista Alegre, October 12; (three in collection of H. B. Conover).

Compared with a female from Moyobamba; three males and three females from the Urubamba Valley (Amer. Mus. Nat. Hist.); two females from Chapada, Matto Grosso, Brazil (Amer. Mus. Nat. Hist.); four males and a female from São Marcello, Macaco Secco, and Rio de las Velhas, Brazil; and a male and female from Fazenda Cajoa, São Paulo, Brazil (Conover collection); also with a male and a female of *chlorauchenia* from the Department of Rocha, Uruguay (U. S. Nat. Mus.); three males and a female of *approximans* from Serra Baturité, São Marcello, and Rio do Peixe, Brazil; twenty-one specimens of *verreauxi* from northern Brazil and Venezuela; and sixteen skins of *decolor* as listed under that subspecies.

I am unable to separate the Chinchao and Vista Alegre birds from the typical south-Brazilian *decipiens*, and the Urubamba specimens (of *intermedia*) belong here also. Hellmayr has compared the females from Chinchao and Vista Alegre with the type of *intermedia* in the British Museum and found the Chinchao bird, in particular, to be a match for it. The female from Moyobamba shows a little approach toward *verreauxi* and the Bôa Vista and Rio Branco skins of *verreauxi* show an approach toward *decipiens*. Specimens from the Marañón Valley and the coast of Perú are referable to *decolor*, discussed below.

Leptotila verreauxi decolor (Salvin).

Leptoptila decolor SALVIN, Novit. Zool., **2**, p. 21, 1895—Cajabamba, Perú; British Mus.

Leptoptila verreauxi occidentalis CHAPMAN, Bull. Amer. Mus. Nat. Hist., **31**, p. 142, 1912—San Antonio, Colombia; Amer. Mus. Nat. Hist.

A male and female from Cullcui, Marañón River, December 13, 1922 (female in collection of H. B. Conover).

Compared with a male from Menucucho, a female from Hacienda Llagueda, and five males from Hacienda Limón; also with four skins from Chongon, Nono, and Puente de Chimbo, w. Ecuador (Conover collection); and a male and four females from the Cauca Valley, Colombia (four in Amer. Mus. Nat. Hist.).

The skins from Menucucho, Hacienda Llagueda, and Hacienda Limón are virtual topotypes of *decolor* and the Cullcui birds are referable to the same form though they vary slightly in the direction of the darker *decipiens*. Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 168, 1926) has discussed the identity of *decolor* and *occidentalis*.

Columbigallina minuta minuta (Linnaeus).

(*Columba*) *minuta* LINNAEUS, Syst. Nat., ed. 12, **1**, p. 285, 1766—based on BRISSON, "Turtur parvus fuscus americanus"; "San Domingo," errore; Cayenne suggested by BERLEPSCH and HARTERT, 1902.

Two males and two females from Huánuco, July 23–29, 1922 (three in collection of H. B. Conover).

Compared with twenty-nine additional skins (Field Mus. Nat. Hist. and Conover collection) from Menucucho, Perú; Georgetown, British Guiana; Villa Rica, Paraguay; Varzea Formosa (Ceará), Ibiapaba (Piauhy), and Alto Parnahyba (Maranhão), Brazil.

The Menucucho birds belong to Bonaparte's *amazilia;* one of the males has been compared with the type in the Paris Museum by Dr. Hellmayr. There seems to be little to distinguish this form from typical *minuta*, however, and I am not certain that it is entitled to recognition. Some of the specimens of *minuta* are just as small as the Menucucho specimens and the coloration varies within about the same limits. On the other hand, my Huánuco specimens are larger than the Menucucho skins but are matched by large specimens of *minuta*. There are noticeable individual differences in coloration throughout the series, some of which appear to be due to age, but with the material at hand I am unable to separate the Huánuco birds from the typical form.

It is necessary to revert to the name *Columbigallina* Boie, 1826, instead of *Chamaepelia* Swainson, 1827, for the present genus. Boie's name was dropped as being preoccupied by *Columbigallina* Oken,

1817, but Oken's name is a pure nomen nudum, without description or reference to any species and hence is untenable. The type of *Columbigallina* Boie is *C. passerina*, by monotypy.

Oreopeleia montana (Linnaeus).

(*Columba*) *montana* LINNAEUS, Syst. Nat., ed. 10, **1**, p. 163, 1758—Jamaica.

A male from Puerto Bermúdez, March 13, 1923 (collection of H. B. Conover).

No races of this wide-ranging species have ever been satisfactorily distinguished.

Coccyzus melacoryphus Vieillot.

Coccyzus melacoryphus VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., 8, p. 271, 1817—based on AZARA; Paraguay.

A male and female from Huánuco, July 20 and 30, 1922.

Compared with thirty additional skins from Uruguay, Argentina, Brazil, Venezuela, and northern Perú (Moyobamba).

No consistent variations are apparent in the series.

Piaya cayana obscura Snethlage.

Piaya cayana obscura SNETHLAGE, Journ. Orn., **56**, p. 21, 1908—Bom Lugar, Rio Verde, upper Rio Purús, Brazil; Pará Mus.?

Piaya cayana boliviana STONE, Proc. Acad. Nat. Sci. Philad., "1908," p. 500, Jan., 1909—Yungas, Bolivia.

A female from the Río Colorado, Chanchamayo Valley, February 6, 1923.

Compared with two females from Río Espirito Santo and Porto Velho, Bolivia, and a female from Huiro, Urubamba Valley, Perú; also with the other material listed under *P. c. nigricrissa*.

The Río Colorado bird is doubtfully referred to this subspecies. It has the under side of the tail as rufescent as the Bolivian and Urubamba Valley skins, in contrast to the blackish coloration of the same region in *nigricrissa*, but the crissum is sootier than in the other skins of the present form though not so black as in the birds from farther north (a Yurimaguas specimen excepted). Probably a series of specimens from the Chanchamayo Valley would show individuals approaching both forms, between which these would exist as intermediates since the locality is intermediate in position. With only one skin at hand from the region it is impossible to say to which race the greater number of individuals might belong.

Having no material from the Purús, I follow recent authors in assigning the Bolivian and Urubamba birds to *obscura*.

Piaya cayana nigricrissa (Cabanis).

Pyrrhococcyx nigricrissa CABANIS, Journ. Orn., **10**, p. 169, 1862—skin from Fraser coll. = Babahoyo or Esmeraldas, w. Ecuador (CHAPMAN, 1926); Berlin Mus.

A male and two females from Vista Alegre, August 16–October 13; a male and female from Chinchao, October 27 and November 9; a male from Hacienda Exito, Río Cayumba (E. Heller coll.), July 30.

Compared with a male from Yurimaguas; also with four females of *obscura* from Río Espirito Santo and Porto Velho, Bolivia, and Huiro, Urubamba Valley and Río Colorado, Chanchamayo Valley, Perú; two skins of *mesura* from Bogotá, Colombia; and various specimens of *cayana*, *macroura*, *cearae* and other South American forms not studied in detail.

The Vista Alegre, Chinchao, and Cayumba specimens answer well to the descriptions of *nigricrissa* and can not be referred to any other known race. The Yurimaguas specimen is not so clearly marked, having the under side of the tail with a slight ferruginous tinge and the crissum less blackish than in the others of the series. It is still closer to *nigricrissa* than to *mesura*, recorded from eastern Ecuador, and can not well be assigned to *obscura* because of the interruption in range; probably it is an unusually pale example of the present form.

This large and showy cuckoo is known locally as "Arriero" because of the resemblance of its unmusical song to some of the syllables used by the arrieros, or mule-drivers, to urge on their recalcitrant charges.

Piaya minuta minuta (Vieillot).

Coccyzus minutus VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., 8, p. 275, 1817—based on LATHAM'S *Cuculus cayanensis*, Var. A; Cayenne.

Two males from the Río Colorado, Chanchamayo Valley, January 29 and February 17, 1923.

Compared with eight adults from British Guiana; Bogotá, Colombia; Orope and Valle, Venezuela; and Conçeição, Brazil; and a juvenal male from Moyobamba, Perú.

Although there is noticeable variation in this assortment of material, no geographic groups can be separated from it. The young bird from Moyobamba is interesting, having the rump dis-

tinctly barred with cinnamon-rufous and fuscous, and the back, head, upper wing-coverts and upper tail-coverts dull brown very faintly tipped with cinnamomeous; rectrices narrowly tipped with cinnamomeous; under parts dull, dark brown.

Illiger's name, *rutilus* (Abh. Ak. Wiss. Berlin, "1812–15," p. 224, 1816), has been accepted by recent authors as having priority over Vieillot's name *minutus* but I believe that this is an error. Through the kindness of Dr. Hellmayr I have had access to a manuscript extract of that part of Illiger's work referring to this matter and find the following transcription: "Zu *Cuculus Cayanus* (417, 14) gehört *Cuculus cornutus* (422, 21); dagegen müssen die Varietäten β und γ als eine sehr verschiedene Art, *Cuculus rutilus* des Museums, abgesondert werden." Illiger thus includes both varieties of Gmelin's species, (*Cuculus*) *cayanus* (var.) β and γ, in the form which he names *rutilus* and there is no evidence that he included γ in error as suggested by Berlepsch and Hartert (Novit. Zool., **9**, p. 97, 1902). Illiger's name, therefore, represents a composite species and should be dropped as unidentifiable. Gmelin's (var.) γ was based on Latham's Var. A which, alone, was named *minuta* by Vieillot the year following Illiger's ill-advised effort. Vieillot, t. c., p. 236, described *Cuculus melanogaster* from "Java" and, p. 277, *Coccyzus rutilus* from Brazil without any references to other authors or to previous nomenclature; they have no bearing on the validity of *minuta* which is the first valid name applied to Latham's Var. A and hence Gmelin's (var.) γ.

Crotophaga ani Linnaeus.

(*Crotophaga*) *Ani* LINNAEUS, Syst. Nat., ed. 10, **1**, p. 105, 1758—based on BROWN, SLOANE, and MARCGRAVE; "America, Africa" (Africa in errore).

Two males and two females from Huánuco, May 28–July 30, 1922; a male from Vista Alegre, October 12.

Compared with numerous specimens from various parts of South America.

The species remains uniform over a wide range of territory.

Crotophaga sulcirostris sulcirostris Swainson.

Crotophaga sulcirostris SWAINSON, Philos. Mag., (new ser.), **1**, p. 440, 1827—Mexico.

A male from Chosica, April 15, 1922; a male from Santa Eulalia, April 22.

Compared with series from various countries of Central and South America.

Apparently confined in Perú to the coastal district. I have not enough material from this region to investigate the status of *casasii* Lesson. Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 341, 1926) thinks it may be difficult to separate from typical *sulcirostris*.

Ara militaris militaris (Linnaeus).

(*Psittacus*) *militaris* LINNAEUS, Syst. Nat., ed. 12, **1**, p. 139, 1766—no locality; Colombia suggested by BRABOURNE and CHUBB, 1912.

?Ara militaris boliviana REICHENOW, Orn. Monatsb., **16**, p. 13, 1908—Bolivia (Machareti, region of upper Pilcomayo); Berlin Mus.

A female from Huachipa, September 7, 1922.

Compared with a Bogotá skin; also with three skins of *mexicana* from Mexico.

The Huachipa bird agrees fairly well with the Bogotá specimen and agrees in part with the description of *boliviana*. The chin, throat, and auriculars are rich Bay with greenish tips on the posterior feathers, somewhat more extensively than in the Bogotá specimen though not more than might be due to individual variation. In this respect the Peruvian bird agrees with the description of *boliviana*. However, the blue of the remiges and the tips of the rectrices is paler, not darker, than in the Colombian skin. In the absence of Bolivian material, of which the describer of *boliviana* had only the type, I am not convinced of the validity of that form and prefer to call the Huachipa bird *militaris*.

Aratinga mitrata mitrata (Tschudi).

C(onurus) mitratus TSCHUDI, Arch. Naturg., **10**, (1), p. 304, 1844—Perú, I suggest Chanchamayo Valley; Mus. Neuchâtel.

A male and female from Chinchao, October 22 and 26, 1922.

Compared with a female from Chanchamayo and five skins from Tucumán, Argentina.

The Argentine birds have decidedly more red on the face than the Peruvian specimens, but the latter are variable among themselves. The Chinchao male has a broad red ring around the eye but only a few scattered red feathers down the malar region. The Chanchamayo female has the orbital ring narrower and has only two or three red feathers on each side in the malar region. The Chinchao female has the orbital ring almost absent while the cheeks

show only narrow red tips on a few feathers of each side. However, the Chanchamayo bird must be nearly topotypical while the Chinchao specimens show the variation in both directions. Possibly the Argentine examples are separable.

At Chinchao, the birds with admixture of red feathers in the body plumage, like the male which I secured, were called "Garga"; examples without such admixture (except on the head), like the female I obtained, were called "Jornalero," being supposed to belong to a different species.

Psilopsiagon aurifrons aurifrons (Lesson).

Psittacus (*Lathamus*) *aurifrons* LESSON, Cent. Zool., p. 63, pl. 18, March, 1831—"Nouvelle Zélande" (emended to Callao in Rev. Zool., **5**, p. 135, 1842); type in Massena coll. (cf. BOURJOT ST. HILAIRE, Perroq., text to pl. 45, 1837–38), and should be in Acad. Nat. Sci. Philadelphia.

C(*onurus*) *sitophagus* TSCHUDI, Arch. Naturg., **10**, (1), p. 304, 1844—Perú; Mus. Neuchâtel.

A male from Matucana, April 29, 1922.

Compared with a male and female of *orbygnesius* from Puno, Perú; a male from Tirapata, Carabaya District, Perú; a male and female from near San Pedro, Antofogasta, Chile; and a male and an unsexed bird from Maimara, Jujuy, Argentina; also with a male and two females of *rubrirostris* from Laguna Blanca, Catamarca, Argentina; and two females from Aconquija and Cerro Muñoz, Tucumán.

The Matucana bird is clearly referable to typical *aurifrons* because of its small size (wing 85 mm.) and the development of the yellow sides and facial area. The series of *orbygnesius* are all larger (wing 102–104 mm.) and without so much yellow on the sides of the breast, forehead, base of malar region, and chin, but several specimens have an appreciable amount of yellow in these places and clearly show their relationship to *aurifrons*. The specimens of *rubrirostris*, with one exception, are washed with glaucous blue underneath and are comparatively distinct from *orbygnesius*, but one of the females from Laguna Blanca is not clearly separable from some of the specimens of *orbygnesius*, being much yellower and greener than the other *rubrirostris*. The Aconquija bird is about intermediate between the two series. Several specimens of this series also show traces of yellowish on the chin or forehead and all of them are perceptibly more yellowish on the sides of the breast. All three forms evidently belong to the same specific group.

Bubo virginianus nacurutu (Vieillot).

Strix nacurutu VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., **7**, p. 44, 1817—based on DAUBENTON, Pl. Enl. 383; Paraguay.

A male from Huánuco Viejo, December 24, 1922.

Compared with ten skins from Tierra del Fuego; Chubut, Patagonia; Mendoza; Concepción, Tucumán; Aconquija, Tucumán; Río Nireguao and Ramadilla, Atacama, Chile.

This material is totally inadequate for the study of this variable species. The Peruvian bird is most like a male from Mendoza (Lujan, Cacheute), Argentina and not greatly different from a Tierra del Fuego specimen, while the females from Concepción, Tucumán, are much buffier and with more widely spaced vermiculations; the Aconquija female is more cinnamomeous with much finer vermiculations. The Patagonian skin is pale but whitish rather than ochraceous. The Chilean specimens are about as dark as the Peruvian bird but with coarser vermiculations. No satisfactory grouping of this material can be made without studying a considerably larger series, and I refer the Peruvian bird to *nacurutu* mainly on the basis of Chapman's identification of Urubamba specimens as that race (Bull. U. S. Nat. Mus., **117**, p. 60, 1921).

Speotyto cunicularia nanodes Berlepsch and Stolzmann.

S(peotyto) cunicularia nanodes BERLEPSCH and STOLZMANN, P. Z. S. London, 1892, p. 388—Lima, Perú; Warsaw Mus.

Two females from Vitarte, April 26, 1922; a male from Chosica, April 27.

Compared with five males of *cunicularia* from Atacama, Coquimbo, and Concepción, Chile; also with the type of *intermedia* from Pacasmayo, Perú.

The Vitarte and Chosica birds are virtual topotypes of *nanodes*. They are rather blacker, less brownish, than *cunicularia* and are smaller (wing of male 168 mm., females 165, 166; as against 172–190 for the males of *cunicularia*). The type of *intermedia* matches the smallest female of *nanodes* in size but is even paler, more sandy brown, than *cunicularia*.

Glaucidium brasilianum brasilianum (Gmelin).

Strix brasiliana GMELIN, Syst. Nat., **1**, (1), p. 289, 1788—based on the Caburé of BRISSON (ex MARCGRAVE); n. e. Brazil; Ceará suggested by HELLMAYR, 1929.

A male from Santa Eulalia, April 19, 1922; two males and two females from Huánuco, July 24–30.

Compared with three males from Menucucho and a female from Hacienda Limón, Perú; a male and two females from Quixada and Juá, Ceará; a male from Ibiapaba, Piauhy; a female from Arara, Piauhy; a female from São Marcello, Bahia; a female from Rio de las Velhas, Minas Geraës; a female from Mangunça Island, Maranhão; a male from Quebrada de los Cuervos, Uruguay; a male, three females, and a bird of undetermined sex from Eldorado, Puerto Segundo, and Iguazú, Misiones, Argentina; and a female from Concepción, Tucumán, Argentina.

My Peruvian birds are all in gray phase except one Menucucho specimen which is neither the one nor the other, while the only specimen from near Ceará which is in the gray phase is a young bird in full molt. Judging by this specimen, however, the Peruvian birds are not distinguishable from typical *brasilianum*. The Argentine and Uruguayan specimens appear to be distinct by reason of browner upper parts without white spotting on the back and with the white markings of the tail forming rounded spots rather than bars. If really separable from *brasilianum* they probably will bear the name *ferox* Vieillot, based on Azara, Paraguay.

This little owl was known locally as "Puk-a-puk-a" from its rapidly reiterated note which is like the syllables "puk-puk-puk-puk-puk . . . ." It was heard frequently in the daytime as well as at night.

Steatornis caripensis Humboldt.

Steatornis caripensis HUMBOLDT, Rec. Obs. Zool. Anat. Comp., 2, p. 141, 1817—Caripe, Venezuela; type lost.

Steatornis caripensis var. *peruviana* TACZANOWSKI, Orn. Pér., 1, p. 199, 1884—Ninabamba, Perú; Warsaw Mus.

Three males and two females from Tingo Maria (collected by E. Heller), October 11, 1922.

Compared with two specimens from Oropuche River, Trinidad, and two Bogotá skins.

No constant differences can be detected in the Peruvian material. Taczanowski's race was described as differing from the typical form only by being smaller and having a more strongly graduated tail, but even these differences can not be found in the material before me.

Nyctibius griseus panamensis Ridgway.

Nyctibius griseus panamensis RIDGWAY, Proc. Biol. Soc. Wash., **25**, p. 91, 1912—Natá, Coclé, Panamá; U. S. Nat. Mus.

A male from Huachipa, October 5, 1922.

Compared with six skins from British Guiana, Brazil (Bahia), Argentina (Tucumán), and Colombia (Bogotá); also with three specimens of *jamaicensis* from the type locality.

The British Guianan skin probably represents fairly typical *griseus* and as Wetmore (Bull. U. S. Nat. Mus., **133**, p. 202, 1926) has referred Paraguayan birds to this form, the Bahian skins should belong to it also; they differ from the Guianan skin at hand principally by having the bars on the inner webs of the primaries rather more distinct. The Argentine specimens are the palest of the lot and have the bars on the primaries more distinct than in the rest of the series, almost as broad as the black interspaces. Their exact identity is doubtful. The Bogotá specimen is the most rufescent of the series and considerably larger than the Guianan example, and I believe that it can be referred to *panamensis*. My Peruvian skin is nearly as large but, while it is distinctly rufescent in places, a blackish coloration is predominant, making the bird much darker than the others.

Wetmore (l. c.) provisionally unites *cornutus* with *griseus* on the basis of Paraguayan skins. The Bahian skins now before me agree with Gould's description and plate of his *pectoralis* from "northern parts of Brazil"; one from São Amaro has the wing 248 mm. in length, almost precisely equal to the 9¾ inches specified by Gould. The Tucumán birds are considerably larger, 265 and 277 mm. in wing length and are thus closer to the Peruvian skin in this respect though farthest from it in coloration. The entire species is in need of revision by someone with a good series from all parts of its range.

When I first heard the weird call of this bird, the natives informed me that it was an "alma perdida" or "lost soul" which was abroad and which, like the "duende" or hobgoblin that inhabited the rivers, it was foolish to think of shooting. However, I found that the bird was not averse to coming when its call was imitated, and succeeded, one moonlit night, in luring one from the depths of the heavy forest to an opening among the trees where it could be obtained. It could just be seen high overhead like a knot on a limb, and only the movement of its head as it answered my imitation of its call showed me that it was the object of my search. The song was a clear, high-

pitched succession of notes dropping down the scale from A, G, and F to D and ending in a descending quaver. The snap of the bill between the notes could be plainly heard. When singing, the bird appeared to sit erect with head thrown backward.

Nyctidromus albicollis albicollis (Gmelin).

(*Caprimulgus*) *albicollis* GMELIN, Syst. Nat., **1**, (2), p. 1030, 1789—based on the White-throated Goatsucker of LATHAM; Cayenne.

Nyctidromus albicollis obscurus CORY, Field Mus. Nat. Hist. Publ., Orn. Ser., **1**, (8), p. 301, 1915—Yurimaguas, Perú; Field Mus. Nat. Hist.

Two males and a female from Vista Alegre, August 27–29, 1922; a male from the Río Colorado, Chanchamayo Valley, January 30, 1923.

Compared with the type of *obscurus* from Yurimaguas and eight additional specimens from northern Perú (Hacienda Limón, Lagunas, Moyobamba, Rioja, and Río Utcubamba), twelve skins from Venezuela, two from Surinam, six from northern Brazil, two from Ecuador, and one from Colombia; also with ten specimens of *derbyanus* from southern Brazil and Bolivia.

The Peruvian specimens, including the type of *obscurus*, are not separable from typical *albicollis*. There is great variation in coloration throughout the series, with the two extremes of brown and sooty plumage quite different when compared with each other, but there are intermediates of every stage. The type of *obscurus* is a dark bird but it can be matched by specimens from near the type locality of *albicollis* while other Peruvian skins are as light in color as any from other regions.

The species was called locally "Tocuyo"—a very good onomatope of the birds' clearly whistled song.

Systellura decussata (Tschudi).

C(*aprimulgus*) *decussatus* TSCHUDI, Arch. Naturg., **10**, (1), p. 268, 1844—Perú; Mus. Neuchâtel.

Caprimulgus aequicaudatus PEALE in WILKES, U. S. Expl. Exped., **8**, p. 168, 1848—Callao, Perú; U. S. Nat. Mus.

A male from Chosica and a female from Santa Eulalia, April 27 and 23, 1922.

Compared with three males of *S. longirostris atripunctata* from Matucana and near Otuzco, Perú, and Río Loa, Antofogasta, Chile; a male and three females of *ruficervix* from Venezuela and Ecuador;

three males and four females of *bifasciata* from the provinces of Colchagua, Coquimbo, Ascención, Concepción, and Cautin, Chile; and a male of *longirostris* from Tucumán, Argentina, and a female from the Province of Buenos Aires.

I am not sure that *decussata* is not a member of the *longirostris* group. Some of the specimens of *bifasciata* are very close to the two specimens of *decussata* in coloration, being very little darker and with an identical pattern except that the spots on the primaries of *decussata* do not cross the shaft as they do in the Chilean birds. The size, of course, is different but the difference might be overcome in larger series. However, without having seen more specimens I do not like to propose specific identity.

At Santa Eulalia the bird was found inhabiting some ancient Inca ruins on the hillsides, hiding in dark corners and taking wing only when in danger of being trodden underfoot.

Systellura longirostris atripunctata Chapman.

Systellura ruficervix atripunctata CHAPMAN, Amer. Mus. Novit., **67**, p. 2, 1923—Acobamba, Junín, Perú; Amer. Mus. Nat. Hist.

A male from Matucana, May 3, 1922.

Compared with the specimens mentioned under *S. decussata*.

The Matucana bird clearly shows the characters of this well-marked form. The locality is in a westward and downward extension of the Junín plateau, so far as this species is concerned, and not an upward extension of the coastal region where *decussata* is found.

I believe it best to place *atripunctata*, *bifasciata*, and *ruficervix* in the same specific group as *longirostris* of central Chile. One specimen of *bifasciata* from Paiguano, Coquimbo, shows the pale markings of the scapulars unusually rounded and with blackish frecklings concentrated in the middle to form a dusky area resembling (though not as sharply defined) those in *atripunctata*. In other respects the specimen clearly belongs to *bifasciata* and matches other skins from Coquimbo. On the other hand a male of *atripunctata* from near Otuzco, Perú, is about intermediate in characters between the Paiguano bird and the Matucana specimen, including the color of the rufous collar. Chapman (l. c.) has indicated that *bifasciata* and *longirostris* from Argentina are conspecific. Since the four forms are obvious geographic representatives, I believe that their relationship is best expressed by trinomials.

Streptoprocne zonaris albicincta (Cabanis).

Hemiprocne albicincta CABANIS, Journ. Orn., 1862, p. 165—"Mexico bis Guiana"; type from British Guiana; Berlin Mus.

Three males and one female from Vista Alegre, October 17, 1922.

Compared with a skin from "Peru" (U. S. Nat. Mus.), four skins from Bogotá (one in Amer. Mus. Nat. Hist.), two males from Dabeiba, Antioquia, Colombia, and one female from Río Chama, Venezuela; also with the type of *altissima* and two additional skins from Ecuador (Amer. Mus. Nat. Hist.); and a small series of *pallidifrons* from the West Indies, *mexicana* from Guatemala, and *zonaris* from Tucumán, Argentina, and Rio Grande do Sul, Brazil. No topotypes of *albicincta* examined.

The Peruvian birds compare well with the Colombian and Venezuelan specimens, although I have not been able to compare them with typical Guianan specimens. All of these differ from three Argentine and one Brazilian *zonaris* by smaller size and noticeably deeper black general coloration. The Tucumán specimens are even more recently collected than my Vista Alegre birds so there is no question of fading. Chapman (Bull. U. S. Nat. Mus., **117**, p. 65, 1921) identifies Peruvian specimens from the Urubamba region as *zonaris*, compared with a comparatively recent Rio skin. Apparently, therefore, both subspecies are found in Perú, *zonaris* in the extreme southeast and *albicincta* in the rest of the country. The size of my Peruvian specimens is rather indeterminate since they are in molt, but, so far as comparable, the measurements are the same as those of Colombian and Venezuelan skins.

The measurement of the specimens has brought out the fact that the length of the tail in these birds is probably greater than is usually recorded. Two of my males have the tail in full molt with the central plumes still in the sheath but with the outer ones apparently full-grown and beautifully fresh and unworn. The lengths of these outer rectrices are 83 and 82½mm., respectively, whereas the maximum tail measurement as given by Ridgway (Bull. U. S. Nat. Mus., **50**, pt. 5, p. 698, 1911) is 72 mm. and by Chapman (Bull. Amer. Mus. Nat. Hist., **33**, p. 606, 1914) is 74 mm. The discrepancy at first appears to point to a possible racial difference but my third male furnishes evidence to the contrary. In this specimen, the rectricial molt is not so far advanced as in the other two birds and the outer rectrices are in the sheath while the central ones are the old worn plumes which have not yet been shed. The length of these worn feathers is matched by that of the correspondingly worn feathers of the Colom-

bian specimens, indicating that the extraordinary length of the tail in the Peruvian birds is due only to their fresh and unabraded condition. A swift's tail is subject to considerable wear and, as indicated by the present series, the loss in length during a season apparently may amount to ten per cent or more of the total length. It may be added that, in the fresh specimens, there appears to be a deeper emargination of the tail than is shown by Ridgway (t. c., pl. 27, fig. 2) or than is exhibited by worn specimens.

Cypseloides rutilus brunnitorques (Lafresnaye).

Chaetura brunnitorques LAFRESNAYE, Rev. Zool., 1844, p. 81—Colombia; Paris Mus.

One male from Chinchao, October 31, 1922.

Compared with seventeen additional skins (U. S. Nat. Mus. and Carnegie Mus.) from southeastern Mexico, Guatemala, Costa Rica, Venezuela, Colombia, and Perú; also with the type of *C. r. griseifrons* (U. S. Nat. Mus.).

Some variation is apparent throughout the series of *brunnitorques* in the depth of color and apparent width of the collar, the extent of the black throat patch, and the suggestion of ashy forehead and supra-loral line, but this variation is irregular and shows both extremes in different examples from the same general region.

One male, however, from Hacienda Llagueda, Perú (Field Mus. Nat. Hist., No. 45,251), taken March 12, 1912, is strikingly different from all the others in the direction of *griseifrons;* in fact its throat is even paler rufous than that of the type, it is equally ashy on the forehead, superciliary region, and lores, but is a trifle darker sooty on the back. It seems impossible not to refer it to *griseifrons*. Since it was taken in winter it apparently represents a migrating individual in winter quarters of this north-Mexican form. No other specimen I have seen from South America can be referred to it although only one of these, a male from Idma, Santa Ana, s. Perú, is likewise a winter bird, the remainder having been taken while the Mexican birds would have been on their breeding grounds in the north. It is possible that the Hacienda Llagueda specimen represents the extreme of individual variation in *brunnitorques*. If this is true, it may prove desirable to examine a good series of birds from Tepic, Mexico, and reconsider the status of *griseifrons*.

This pretty swift was seen at various places, in the gorge of the Huallaga River between Huánuco and Cerro de Pasco, in the vicinity of Panao, and in other mountainous localities, coursing and circling

in large flocks high in the air. Only once, at Chinchao, did a flock descend low enough to give an opportunity to secure a specimen.

Phaethornis guy apicalis (Tschudi).

Tr(ochilus) apicalis TSCHUDI (ex LICHTENSTEIN MS.), Arch. Naturg., **10**, (1), p. 296, 1844—Perú; Berlin Mus.

A female from Vista Alegre, August 17, 1922; a female from Chinchao, November 14.

Compared with ten specimens of *emiliae* from Bogotá and near Palmira, Colombia; San Cristóbal, Venezuela; and Ecuador (ex Buckley).

I can see no differences among the females of *emiliae* and those of *apicalis* except that the latter average smaller. The measurements of my two birds are: wing 56, 56½ mm.; tail 62, 64; culmen 35½, 37¼. The females of *emiliae* (four) measure: wing 58–62 mm.; tail 60–68; culmen 36½–41½. The differences might disappear in a larger series.

F. Heine (Journ. Orn., 1886, p. 177) examined the type of *apicalis* and identified it as equivalent to the later *emiliae*. More recent authors have overlooked the priority of Tschudi's name and placed it as a synonym of *emiliae* except Simon who (Hist. Nat. Troch., p. 258, footn. 4, 1921) noted the correct date but overlooked Heine's critical note on the type and was in doubt as to the positive identity of the name. If future studies show the Peruvian birds to be inseparable from Colombian skins, as suggested by Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 284, 1926), *emiliae* must be submerged under *apicalis*.

Pygmornis longuemarea atrimentalis Lawrence.

Phaethornis atrimentalis LAWRENCE, Ann. Lyc. Nat. Hist. N. Y., **6**, p. 260, 1858—Napo, Ecuador; Amer. Mus. Nat. Hist.

Phaëthornis riojae BERLEPSCH, Ibis, 1889, p. 182—Rioja, n. Perú; Mus. Frankfort.

A female from Puerto Bermúdez, March 8, 1923.

Compared with two skins of *longuemarea* from Trinidad and "Guyana," a specimen of *striigularis* from Bogotá, and one of *subrufescens* from Río Dagua, Colombia.

The Peruvian specimen certainly is not specifically distinct from *longuemarea*, and *striigularis* and *subrufescens* seem to belong to the same group. My specimen agrees well with Lawrence's original

description of *atrimentalis* but geographically should belong to *riojae*. Dr. Hellmayr (MS.) reports that he has compared the type of *riojae* with certain skins from the Río Napo and later compared one of these skins with the type of *atrimentalis*, with the result of finding them racially inseparable. The type of *riojae* is an adult male and that of *atrimentalis* is an immature bird, which accounts for differences in the descriptions of the two specimens.

Eutoxeres condamini gracilis Berlepsch and Stolzmann.

Eutoxeres condaminei gracilis BERLEPSCH and STOLZMANN, P. Z. S. London, 1902, p. 19—Vitoc, Perú; formerly Warsaw Mus., now lost.

A male from Vista Alegre, August 27, 1922; a female from Huachipa, October 3.

Compared with a skin from the Napo region, Ecuador (Buckley coll.).

The two Peruvian birds agree well with the original description of *gracilis* in most particulars. In comparison with the Ecuadorian skin they are slightly smaller with distinctly shorter bills (25 mm. as against 28½); the ochraceous streaks on the chest are a little broader; the purplish tone of the submarginal portion of the under tail-coverts is less strongly developed; the cinnamomeous color of the outer rectrices is somewhat paler, and the top of the head is a little blacker (possibly faded in the Napo skin). The general coloration of the upper parts is the same in the male from Vista Alegre as in the Napo specimen, but the female from Huachipa is a little clearer green. The patch on the side of the neck is much bluer in the male than in either of the other specimens.

This bird was found about the hanging flowers of a low bush in open parts of the tropical forest. The flowers were of such a shape that the bird was obliged to throw its head back to insert the tip of the bill, which followed the curves of the corolla as the head was returned to a normal position. The hummers did not remain long at the flowers but made away through the forest by rapid, direct flight, just above the ground, not pausing until out of sight. I noted nothing in the field or by dissection to explain the bald stripe on the top of the head which is not possessed by the allied species *E. aquila*.

Colibri iolotus (Gould).

Petasophora iolota GOULD, P. Z. S. London, **15**, p. 9, 1847—Bolivia; British Mus.

Pinarolaema buckleyi GOULD, Ann. Nat. Hist., (5), **5**, p. 489, 1882—Misque, Bolivia; melanism; British Mus.

Colibri iolatus brevipennis CORY, Field Mus. Nat. Hist. Publ., Zool. Ser., **13**, pt. 2, No. 1, p. 221, 1918—Caracas, Venezuela; Field Mus. Nat. Hist.

Four males from Matucana, April 29–May 3, 1922; two males from the mountains near Huánuco, 10,500 feet, June 9 and 12; a male from Panao, July 17; a male from Vista Alegre, August 19; four males and a female from Chinchao, October 22–24.

Compared with a male from Bolivia; thirteen males from Perú (Macate, Cajamarca, Hacienda Llagueda, and Río Utcubamba); three males and a female from "Ecuador"; nine skins from Colombia (Bogotá and Santa Marta Mts.); and nineteen males from Venezuela (Culata, Conejos, Sierra, Mucunutan, Escorial, Río Chama, and Caracas—the type of *brevipennis*).

No constant differences can be found in this series. The type of *brevipennis* is a small bird, but it is matched by skins from Perú and other localities both in size and coloration, while other Venezuelan specimens exhibit a range of variation too wide to make any separation advisable.

This species is very pugnacious and takes delight in driving away other individuals that come near it, especially those of smaller species. Its note is a sharp, "zeep, zeep, zeep," which it utters continuously while perched on the top of a bush or weed. On April 29, I found the nest of a pair of this species at Matucana. A large branch of a tree overhung a stream, and on the under side of the branch a slender twig was curved down and upward again to form a semicircular loop with just enough space between it and the large branch to hold the nest and allow head room for the brooding bird. Two white eggs were in the nest but they were too far advanced in incubation to be blown.

Colibri cyanotus cyanotus (Bourcier and Mulsant).

Trochilus cyanotus BOURCIER and MULSANT, Ann. Sci. Phys. Nat. Agric. Lyon, **6**, p. 41, 1843—Caracas, Venezuela; Bourcier coll.?

Three males from Panao, July 4 and 5, 1922.

Compared with two males and an immature bird from Culata, Conejos, and Mérida, Venezuela, and three Bogotá skins; also with five skins of *cabanidis* from Costa Rica.

The Peruvian birds average paler and greener on the throat than the more northern specimens, some of which approach *cabanidis* rather closely.

This species was seen only in the neighborhood of Panao where the larger species *iolotus* also occurred. The present bird was easily

recognizable by its song, which was a flat, monotonous, "peter-dick, peter-dick, peter-dick," continued indefinitely and delivered from a perch on the top of a bush in the manner of the song of the larger species. It was not as aggressive in habits as *iolotus*.

Chlorostilbon prasinus phaeopygus (Tschudi).

Tr(ochilus) phaeopygus TSCHUDI (ex LICHTENSTEIN MS.), Arch. Naturg., **10**, (1), p. 297, 1844—Perú (probably Chanchamayo Valley); Berlin Mus.

Hylocharis daphne BONAPARTE, Rev. Mag. Zool., 1854, p. 255—Peru.

Three males and a female from Huánuco, July 20–27, 1922; three males from Chinchao, October 22–November 8; a male from Vista Alegre, August 23; a male from Río Cayumba (below Vista Alegre) collected by E. Heller, July 30.

Compared with a male from Chanchamayo.

I am indebted, for the synonymy of this race, to Dr. Hellmayr who has examined the type of Tschudi's *phaeopygus* and found it to be the form later described by Bonaparte as *daphne*.

Thalurania furcata tschudii Gould.

Thalurania tschudii GOULD, P. Z. S. London, 28, p. 312, 1860—Río Ucayali (Perú); Paris Mus.

Thalurania jelskii TACZANOWSKI, P. Z. S. London, 1874, p. 138—Soriano, Chanchamayo Valley, Perú; formerly Warsaw Mus., now lost.

Three males from Río Colorado, Chanchamayo Valley, January 31 and February 1, 1923.

Compared with two immature males from Moyobamba, Perú; also with seven males and six females of *bolivianus* from Bolivia (Buena Vista, Tres Arroyos, and one unspecified locality); seven males and a female of *furcata* from French Guiana; two males of *nigrofasciata* from "Ecuador" and "Bogotá"; two males of *intermedia* from Santarem, Brazil; six males and a female of *furcatoides* from Tury-assú and São Luis (Maranhão) and Utinga (Pará), Brazil; three males and two females of *fissilis* from British Guiana and Serra da Lua, Brazil; and ten males and five females of *baeri* from Tranqueira and Inhuma (Maranhão), São Marcello (Bahia), and Urucum de Corumbá (Matto Grosso), Brazil.

My Río Colorado specimens, one of which is beautifully adult, agree perfectly with Gould's description of *tschudii*, while they are practically topotypes of *jelskii*. Furthermore, Gould in describing

tschudii had before him a specimen collected by Tschudi in Perú. This must have come from near the Chanchamayo Valley since Tschudi did not get any farther north than that region in the tropical zone of the interior of Perú. Gould states that his species was matched exactly by Tschudi's bird which was also a topotype of the later-described *jelskii*. Consequently it is evident that *tschudii* and *jelskii* are synonymous.

Bolivian birds are separable by having the chest entirely violaceous without the greenish tinge present in *tschudii* and without so pronounced a blackish border on the sides of the breast posteriorly. A name is available for this race (long identified erroneously as *jelskii*) in *bolivianus* Boucard (Gen. Hum. Birds, p. 107, 1894—Bolivia).

My most fully plumaged bird has the rump strongly tinged with reddish purple as in *furcatoides*, the middle wing-coverts also are reddish purple, and the top of the head has suggestions of the same color though the crown is rather dark and inclined to glitter in certain lights.

Chrysuronia oenone josephinae (Bourcier and Mulsant).

T(rochilus) Josephinae BOURCIER and MULSANT, Rev. Zool., 1848, p. 272—loc. ign.; type?

Agyrtria Alleni ELLIOT, Auk, **5**, p. 263, 1888—Bolivia; ♀; Amer. Mus. Nat. Hist.

Chrysuronia Buckleyi BOUCARD, Hum. Bird, **3**, No. 1, p. 9, 1893—Bolivia; Paris Mus.

Ch(rysuronia) oenone intermedia HARTERT, Novit. Zool., **5**, p. 519, 1898—Upper Amazons = Pebas, Perú (cf. HARTERT, Novit. Zool., **29**, p. 406, 1922); Tring Mus.

A male from Chinchao, October 22, 1922; a male from Vista Alegre, August 18.

Compared with a male from Pebas and a female from Rioja, Perú, and with seven males and a female from Bolivia; also with seven skins of *oenone* from Ecuador, Colombia, Venezuela, and Trinidad.

Three of the Peruvian birds have the culmen 20, 20½ and 20½ mm. in length; the Vista Alegre example has it 19 mm. The Bolivian specimens show a variation of from 17 to 19 mm., averaging less than the Peruvian series. The Pebas example is topotypical of *intermedia* and should belong to that form (if it is distinct) which is described as having the chin blue, but there is no trace of blue on the chin in

this example. The Chinchao specimen shows a tiny trace of that color at the point of the chin but the other Peruvian specimens are inseparable from the Bolivian in coloration. The bill in *oenone* shows a variation of from 19 to 21 mm. without relation to locality, and the coloration of the series from different places is uniform, from which it appears that *longirostris*, *azurea*, and *brevirostris* are hardly entitled to recognition, although my series is too small to make this unquestionable. The individual variations exhibited by the specimens in hand seem to point to but two valid races, *oenone* and *josephinae*.

Leucippus chionogaster chionogaster (Tschudi).

Tr(ochilus) leucogaster TSCHUDI (nec GMELIN), Arch. Naturg., **10**, (1), p. 297, 1844—Perú; Mus. Neuchâtel.

Tr(ochilus) chionogaster TSCHUDI, Faun. Per., Aves, p. 39, 1845—new name for *Tr(ochilus) leucogaster* TSCHUDI.

Leucippus pallidus TACZANOWSKI, P. Z. S. London, 1874, p. 542—Huanta; young bird (cf. SZTOLCMAN, Ann. Zool. Mus. Pol. Hist. Nat., **5**, No. 4, p. 209, 1926); Warsaw Mus.?

Two males from Huánuco, May 24, 1922; two males from Chinchao, October 22 and 27.

Compared with thirteen specimens of *hypoleucus* from Parotani and Buena Vista, Bolivia, and Santa Ana, Tucumán, Argentina.

The Peruvian series is separable from the Bolivian and Argentine examples by having the flanks more broadly and strongly green. Other recorded differences of coloration and size do not hold in the present material.

I use the name *hypoleucus* Gould in preference to *turneri* Bourcier without other reason than the *auctorum plurimorum* principle; both names were published in November, 1846.

Amizilia amazilia amazilia (Lesson and Garnot).

Orthorynchus Amazilia LESSON and GARNOT in DUPERREY, Voy. Coquille, Zool., pl. 31, fig. 3, July 25, 1825—no loc.; Paris Mus.?

Orthorhynchus Amazilia LESSON in DUPERREY, Voy. Coquille, Zool., **1**, p. 683, April 3, 1830—Lima and Callao, Perú.

A male from Vitarte, April 26, 1922.

Compared with a female from Callao and a male labeled "Peru (Whitely)"; also with a male of "*leucophoea*" from Hacienda Llagueda (near Otuzco) and a skin labeled "Peru"; and a male of *dumerili* from Guayaquil, Ecuador.

The Vitarte bird is a virtual topotype and the Callao example exactly one. They and the third specimen agree with the characters of the typical race. I believe that the type locality of *"leucophoea"* of Reichenbach should be changed from "Süd Peru, Vulkan Arequipa" to "N. W. Perú." The type was collected by Warscewicz who in other instances is known to have labeled specimens wrongly. The bird in question has never been collected in Arequipa by any subsequent collectors, but numerous specimens have been taken in northwestern Perú which agree with Reichenbach's figure.

The Vitarte bird is so badly worn that the rufous margins of the belly have practically disappeared, leaving a black patch (formed by the black bases of the feathers) covering the area, which gives the specimen an unfamiliar appearance. There is a small black patch on each side of the breast formed in the same manner.

Lampraster branickii Taczanowski.

Lampraster branickii TACZANOWSKI, P. Z. S. London, 1874, p. 140, p. 21, fig. 1—Monterico, Perú; formerly Warsaw Mus., now lost.

A male from Río Colorado, Chanchamayo Valley, February 16, 1923.

No specimens compared directly, but a skin, probably from Bolivia (Amer. Mus. Nat. Hist.), examined.

The present example agrees very well with the original description and plate. The species is close to *Agapeta* and *Clytolaema*.

Butler (Ibis, 1926, p. 338) already has suggested that if *Agapeta* is preoccupied by an earlier *Agapete* (which it is not, according to the recommendations of the International Commission of Zoological Nomenclature) the genus may well be called *Lampraster*, since the genera are hardly separable.

Only three other specimens of this rare bird are known to have been collected by ornithologists. The type was secured by Jelski at Monterico and is lost. Kalinowski obtained two at La Gloria, one of which is in the Warsaw Museum; the other was formerly in the Berlepsch collection, now at Frankfort, but disappeared some years ago. Two other native skins were found by Dr. Thomas Barbour attached to an Indian necklace in a museum in La Paz, Bolivia, supposed to have come from the Río Beni; one of the skins is in the Museum of Comparative Zoology and the other, which I have examined, is in the American Museum of Natural History.

My example was collected at the edge of the forest. It was found perched on a twig just inside the clearing along a roadside

through the plantation, and was the only individual of its kind observed.

Heliodoxa leadbeateri leadbeateri (Bourcier).

Trochilus leadbeateri BOURCIER, Rev. Zool., 1843, p. 102, April, 1843—Caracas, Venezuela; Paris Mus.

Tr(ochilus) Otero TSCHUDI, Arch. Naturg., **10**, (1), p. 298, 1844—Perú; Mus. Neuchâtel.

Leadbeatera grata BONAPARTE, Consp. Av., **1**, p. 70, 1850—new name for *Trochilus leadbeateri* BOURCIER.

Coeligena sagittata REICHENBACH, Aufz. Colib., p. 23, 1854—N. Perú; Dresden Mus.?

Heliodoxa leadbeateri parvula BERLEPSCH, Journ. Orn., **35**, p. 320, 1887—Bogotá; Frankfort Mus.

A young male from Chinchao, October 23, 1922.

Compared with six males and two females from Bogotá and one male from San Augustin, Colombia; three males and a female from Sierra, Montañas, Nevados, and Mérida, Venezuela; and a male from Roquefaldas, Bolivia.

This material represents the various races which have been described from the region between Venezuela and Bolivia but I am unable to recognize more than one form in it. Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 304, 1926), with a greater variety of material, reached the same conclusions.

Oreotrochilus estella stolzmanni Salvin.

Oreotrochilus stolzmanni SALVIN, Novit. Zool., **2**, p. 17, 1895—Huamachuco, Perú; British Mus.

Two males from La Quinua, May 15, 1922; two young males from the mountains near Huánuco, 12,500 feet, June 9; two males and a female from Huánuco Viejo, December 20 and 24.

Compared with three males and three females of *estella* from Putre, Tacna, a male from Quispicanchis, Marcapata District, two females from Tirapata, Carabaya, and a female labeled "Peru"; also a female and a male from Argentina and a male from Bolivia; compared also with five males and a female of *O. leucopleura* from Tucumán and Jujuy, Argentina, and "Chile."

The specimens from La Quinua are distinctly more bronzy and less greenish than those from a little farther north, which seems to indicate an approach toward the duller, less greenish upper parts of

estella. Most of the specimens of the latter form show traces of glossy blue on some of the rufous feathers of the middle belly; the Quispicanchis male, though immature, has a stronger bronzy luster on the upper parts than the other examples of *estella*, showing a tendency in the direction of *stolzmanni*. I would place *leucopleura* as another race of this species were it not for the fact that both *leucopleura* and *estella* have been recorded from the same localities in a few instances. Probably future investigations will show that the occurrences were winter visitations or that the examples in question were intermediates of a sort, but until such evidence is forthcoming it is best to leave the forms specifically distinct; *leucopleurus* is even closer in characters to *stolzmanni* than is *estella* which occurs between the others, a not unusual condition.

This species was often noted perching on the bare surface of the rocks in the temperate zone.

Patagona gigas peruviana Boucard.

Patagona gigas peruviana BOUCARD, Gen. Hum. Birds, p. 61, 1893—Perú = Tinta, Dept. Cuzco; Paris Mus.

Patagona gigas boliviana BOUCARD, l. c.—Bolivia; Paris Mus.

A male and female from Matucana, May 3, 1922; a female from Cullcui, Marañón River, December 10; a female from Huánuco Viejo, December 22.

Compared with twenty-three additional skins from Tinta, Hacienda Llagueda, Cajamarca, Macate, and Putre, Tacna; also with thirteen skins of *gigas* from Caldera, Coquimbo, Aconcagua, Limache, and Santiago, Chile, and Tucumán, Argentina.

The Peruvian birds, with one or two exceptions, are consistently larger than the Chilean skins, with longer wings and longer, heavier bills. They also, with one or two exceptions, are more rufescent on the under parts, sometimes very markedly so. Since Dr. Hellmayr plans to discuss the characters of these two races in a forthcoming paper on the birds of Chile, I will leave further details to his able pen.

The species was found only in the arid subtropical and temperate zones. One or two examples were seen near the town of Huánuco but were not secured. The birds were noted most commonly about the tall flowering spikes of various species of agave.

Aglaeactis castelnaudii (Bourcier and Mulsant).

T(rochilus) Castelnaudii BOURCIER and MULSANT, Rev. Zool., 1848, p. 270—Amér. mérid.; Paris Mus.

Two males and four females from the mountains near Huánuco, 11,500 and 12,200 feet, June 7–26, 1922.

No material for comparison.

The series is quite uniform. The males are darker and deeper in coloration than the females and have a somewhat more extensive patch of glittering color on the lower back; they also have longer wings and possibly shorter bills (the bill of one male is broken). The sexes are otherwise very much alike.

This hummer was obtained around patches of flowering plants in the small open glades of the woodland in the temperate zone.

Lafresnaya lafresnayi rectirostris Berlepsch and Stolzmann.

Lafresnayea saul rectirostris BERLEPSCH and STOLZMANN, P. Z. S. London, 1902, p. 24—Pariayacu, Maraynioc, c. Perú; Warsaw Mus.

A male and two females from the mountains near Huánuco, 10,000–12,200 feet, June 2–23, 1922; two males and three females from Panao, July 5–15.

Compared with three males and a female of *gayi*(?) from Ecuador; five males and a female of *lafresnayi* from Bogotá, Colombia; and three males of *liriope*(?) from the Mérida region of Venezuela.

The Peruvian birds are distinguishable from the Ecuadorian series by a smaller bill and longer wing, a more bronzy green back, and a lighter (less bluish) green throat. The Venezuelan birds differ from both Ecuadorian and Peruvian specimens by even longer bill, more bronzy green middle rectrices, and distinctly greenish instead of purplish black tips on the outer rectrices. These characters seem to favor the recognition of the three subspecies mentioned, assigning the Venezuelan birds to the Santa Martan race, *liriope*. However, Brabourne and Chubb have attempted to designate Venezuela as type locality for *gayi*, though I can see no grounds for this designation, and to follow their action may necessitate dropping *liriope* as a synonym of the earlier name. Bourcier and Mulsant did not assign any type locality for their species, *gayi*, and there is no evidence that I can find to indicate that the types or type came from that region. At the date of the original description, 1846, there had been no collecting done in the Mérida region of Venezuela, and nowhere else in that country is the present species found. The original specimens may have come from Santa Marta, from western Colombia, or, like the type of *saül*, from Ecuador, but rather certainly not from Venezuela. In the absence of the original specimens it is impossible to say to what form they belonged and it might be better to drop the

name entirely and call the Ecuadorian birds *saül* until some definite information is obtainable—an unlikely happening if the types are lost.

In any case, the Peruvian birds are recognizable as *rectirostris* although the character of a relatively straight bill, mentioned in the original description, is valueless, having been based on an individual feature of the single specimen known to the describers.

Pterophanes cyanopterus (Fraser).

Ornismya Temminckii BOISSONNEAU (nec LESSON, 1829), Rev. Zool., 1839, p. 354—Bogotá, Colombia; type lost?

Trochilus cyanopterus FRASER, P. Z. S. London, 8, p. 17, 1840—Bogotá; type?

Pterophanes peruvianus BOUCARD, Gen. Hum. Birds, p. 263, March, 1895—Perú; Paris Mus.

Two males and two females from the mountains near Huánuco, 12,200 feet, June 9–28, 1922.

Compared with a male and two females from Bogotá, Colombia, a male from Ecuador, and a male from Bolivia.

Only the Bolivian bird and one Peruvian skin are perfectly adult and they are almost exactly alike in coloration, though the Peruvian bird is a little darker on the top of the head. The other Huánuco male is nearly adult and matches the Bolivian bird in the color of the crown, but has a mixture of rufous on throat and crissum and has the remiges dull, only tinged with blue at the base on the under side. The other males in the series are like this young bird but with even more rufous on the under side. Such differences as exist are evidently those of age and individual variation. The characters of *peruvianus* are not apparent in any of the Peruvian or Bolivian specimens. The females from Colombia and Perú are alike.

This handsome species was rather uncommon. It was found only at high elevations about the brilliant pink flowers of a certain spiny-stemmed tree, and not many of the trees were observed in blossom. In flying, the wings have a slow, butterfly-like motion that is quite unlike the usual hummingbird flight and which may have some relation to the unusual brilliancy of coloration of the remiges. This coloration would not be exhibited to best advantage if the wings were vibrated at the usual rapidity of a hummer's flight, but is distinctly noticeable as displayed by the present species.

Helianthea violifera dichroura Taczanowski.

Helianthea dichroura TACZANOWSKI, P. Z. S. London, 1874, p. 138—Maraynioc, Perú; Warsaw Mus.?

A male from the mountains near Huánuco, 10,500 feet, June 14, 1922; a male from above Panao, July 10.

Compared with a male and female of *osculans* from Limbani, Carabaya, Perú.

From *dichroura* through *osculans* to *violifera* (judging by various descriptions of the last named), there is a progression of characters shown by a gradual increase of the rufous on belly, tail, and rump with a corresponding decrease in the amount of green on those parts. The present specimens show an approach to one of the characters of *violifera* which is not shared by *osculans*. This is a narrow white band on the breast, quite distinct in one example but prominent only on the sides in the other. The frontal patch in one example shows a trace of blue on the posterior portion, when viewed in certain lights, that may be taken as a trend toward the blue patch of *osculans*.

Ensifera ensifera (Boissonneau).

Ornismya ensifera BOISSONNEAU, Rev. Zool., 1839, p. 354—Bogotá; type lost?

Trochilus derbianus FRASER, P. Z. S. London, 8, p. 16, 1840—Bogotá.

Docimastes Schliephackei HEINE, Journ. Orn., **11**, p. 215, 1863—Riobamba, Ecuador; Halberstadt Mus.

Nine males, one female, and one probable female from the mountains near Huánuco, June 1–16, 1922.

Compared with five males and two females from Bogotá.

The Bogotá material is not entirely satisfactory and I am not sure that the Peruvian specimens represent the same form as that found in the north. The greatest difference noticeable is in the color of the throat of the adult males, which is deep black with green and purple reflections in the Peruvian skins and dull brownish black with faint greenish reflections in the Bogotá examples. There is no constant difference in size and the difference in color may be due to post-mortem change in the older material.

This interesting species was not uncommon about a certain long-tubed flower, for entering which its extraordinary bill was perfectly adapted. The hum of the rapidly moving wings was very pronounced when the bird was poised before the blossoms, and was different enough in pitch from the sound made by other species to be recognizable and, in many cases, to give the first intimation that one of these birds was in the immediate vicinity. When resting on a perch, the hummer carried its bill pointing upwards at less than ten

degrees from the vertical; when flying it carried the bill nearly horizontally.

Ocreatus peruanus (Gould).

Spathura peruana GOULD, Mon. Troch., 3, p. 164, 1849—Moyobamba, Perú; Mathews coll., Hackney, London.

An adult male from Huachipa, September 28, 1922; two young males and a female from Chinchao, October 23–November 18.

Compared with specimens of *melananthera* from Ecuador, *underwoodi* from Colombia, and *discifer* from Venezuela.

Without specimens from northern Perú, eastern Ecuador, southern Perú, and Bolivia to furnish a means of studying the relationships and variations of *solstitialis*, typical *peruanus*, *annae* and *rufocaligatus*, it is difficult to do much with the present specimens. Judging by the accounts of Simon and of Hartert, my adult male agrees best with *peruanus* and the female and young males are probably the same.

The Huachipa bird was taken in the depths of the tropical forest; the specimens from Chinchao were found about the blossoms of the "pacay" trees in the more or less open plantation.

Lesbia nuna pallidiventris (Simon).

Psalidoprymna pallidiventris SIMON, Novit. Zool., 9, p. 182, 1902—Algamarca, Araqueda, "prov. Cojabamba" = Prov. Cajamarca, Perú; Simon coll., Paris.

P. gracilis labilis SIMON, Hist. Nat. Troch., 1, 194, 1921—Cajabamba, Perú; Simon coll., Paris.

P. gracilis longicauda SIMON, loc. cit.—Otuzco, Chitahuara, Perú; Simon coll., Paris.

Two males from Cullcui, Marañón River, December 14, 1922.

Compared with a male from Tabaconas (Mus. Comp. Zool.), one from Macate, two males from Hacienda Llagueda (near Otuzco), a male from Callahuate, and a female from Río Utcubamba, Perú; also with one male of *nuna* from Paucartambo, Perú; one of *boliviana* from "Bolivia"; three males and a female of *chlorura* from near Huánuco and Chinchao, Perú; three males of *gracilis* from "Ecuador"; and four males and four females of *gouldii* from "Bogotá."

This series presents a perfect specific group ranging from Colombia to Bolivia. The characters are variously progressive. The length of the bill gradually increases from *gouldii* to *boliviana* as does

the extent of buffy margins on the under tail-coverts. The outer rectrices are largely glossed with green in *gouldii*, *gracilis*, and *chlorura;* without green gloss in *nuna* and *boliviana*, and variable in *pallidiventris*. The extremes in distribution, *gouldii* and *boliviana*, show no pale outer margins of the outer rectrices beyond the tips of the subexternal pair; *gracilis* and *pallidiventris* are alike in this respect and show a centimeter or more of pale grayish margin, visible on the closed tail but not sharply defined terminally; *chlorura* has only a few millimeters of pale margin so visible, but this amount is paler and whiter than in *pallidiventris* and rather sharply terminated. All agree in the truncate gorget and the extensive green on the four inner pairs of rectrices, which distinguish this group from *victoriae* and its allies. Judging by available information, the *nuna* group occupies slightly lower elevations in the mountains than the *victoriae* group, of which more will be said under *chlorura*.

Simon's trinomials for *"labilis"* and *"longicauda"* are intended as names for individual variants, not for geographic subspecies, since both forms and his typical *pallidiventris* are from the same region. In the present series, the two Hacienda Llagueda birds show two of the extremes, one with no greenish lights on the outer rectrices, the other greenish in certain positions though much duller than in *chlorura*, *gracilis*, and *gouldii*. The Macate bird has noticeable green; the Callahuate skin has none; the Cullcui birds are intermediate. The form appears to be intermediate between *gracilis* and *chlorura* and apparently is variable.

Gray's designation of *Trochilus forficatus* Linnaeus as type of the genus *Lesbia* Lesson is invalid, since that species was not among those originally included in the genus; the next valid designation is that of *nuna* by Salvin, 1892, and since *Lesbia* antedates *Psalidoprymna* the former name must be used for the present genus.

Lesbia nuna chlorura Gould.

Lesbia chlorura GOULD, P. Z. S. London, 1871, p. 504—supposed to be Perú; type lost.

Three males from the mountains above Huánuco, 10,500 feet, June 3–8, 1922; a female from Chinchao, November 3.

Compared with the material noted under *L. n. pallidiventris*.

Since the time Gould described this species from a single skin of unknown origin, there has been considerable speculation as to its relationships and habitat and even its identity. A careful study of the present material reveals the fact that it belongs to the long lost

chlorura, that this species is related to the *nuna-gouldii* group, and that it inhabits the central Andes of Perú adjacent to the Junín plateau (at least northward) at about 10,000 feet elevation. The adult males agree perfectly with Gould's description, having the outer rectrices strongly glossed with green as in *gouldii*, and having the bill distinctly longer than in *gouldii* and *gracilis* (also longer than in *pallidiventris* but shorter than in *nuna*). Aside from the difference in the size of the bill, the outer margins of the outer rectrices are paler (whiter) basally than in any other race of *nuna*, with about 4–6 mm. showing beyond the tips of the penultimate pair (see account of *pallidiventris*), and the under tail-coverts are largely brownish buff with a small central spot of greenish.

The female from Chinchao appears to belong to this race rather than to *pallidiventris* by reason of similar under tail-coverts and long bill, though the latter is slightly shorter than in the males. Culmen in males, 12¼ mm.; in the female, 11¾ mm.

The Huánuco birds all were taken at an elevation of approximately 10,500 feet. Some distance higher on the same mountain slopes, at an elevation of about 12,000 feet, the species is replaced by a member of another group, *P. victoriae juliae*. Apparently these two species are altitudinally distinct.

Lesbia victoriae juliae (Hartert).

Psalidoprymna juliae HARTERT, Novit. Zool., **6**, p. 75, 1899—Cajabamba, n. Perú; Tring Mus.

Four males from the mountains near Huánuco, 12,000 feet, June 2–9, 1922.

Compared with nine males and two females of *victoriae* and "*aequatorialis*" from Bogotá, Colombia, and "Ecuador," respectively.

The Peruvian birds are separable from *victoriae* (which I am unable to subdivide into Colombian and Ecuadorian races) by shorter bill and tail and paler buffy under tail-coverts.

This species was found about low beds of flowers on the high plains at the top of the Andes, in the *puna* zone. Lower down the slopes, at 10,000 feet and thereabouts, in the humid subtropical and lower temperate zones, *L. nuna chlorura* was obtained.

Polyonymus caroli (Bourcier).

Trochilus caroli BOURCIER, P. Z. S. London, **14**, p. 48, 1847—no loc.; type lost.

One adult male, two young males and five females from Cullcui, Marañón River, December 14, 1922; one young male from Matucana, May 2.

Compared with a young male from Macate; two males from Chipa, Junín, and Otuzco or Cajabamba (O. T. Baron coll.), Perú (Amer. Mus. Nat. Hist.); and a male and female from Lima and (probably) Tambo de Aza, Vitoc Valley (U. S. Nat. Mus.).

Among the adult males there is no appreciable variation in the color of the throat, but the females have the gorget somewhat paler red with the feathers broadly margined with whitish, giving a spotted appearance. M. Jacques Berlioz of the Paris Museum writes me that seven or eight male specimens in various museums in Paris are all much paler beneath with the throat more pinkish than my Cullcui bird, and he believes that they must be younger than mine.

Bourcier described this species from a specimen which he saw in the collection of birds belonging to Edward Wilson, which Wilson later presented to the Academy of Natural Sciences of Philadelphia; the type, if still in existence, should be in that institution. Unfortunately it seems never to have reached Philadelphia since no skin of the species is in the museum of the Academy; nor is there any record of such in the catalogue of the Wilson collection, as I have ascertained through the kindness of Mr. C. E. Underdown, formerly of the Academy, who made a search for me through the collection and records. Probably the specimen was among others lost in transit, as mentioned in Jardine's Contributions to Ornithology, 1852, p. 59.

My single adult male example of this rare hummingbird was collected at camp as it hovered about the blossoms of a spreading cactus plant that grew in the shelter of the mud walls enclosing the compound. Another was seen later in the dense and spiny thicket along the river but could not be secured.

Tephrolesbia griseiventris (Taczanowski).

Cynanthus griseiventris TACZANOWSKI, P. Z. S. London, 1883, p. 72—Paucal, Perú; Raimondi coll., Lima, Perú.

A female from Cullcui, Marañón River, December 14, 1922.

Compared with an adult male, four young males, and five females of *Polyonymus caroli* from the same locality and from Matucana and Macate.

The present species is doubtfully separable generically from *Polyonymus caroli*. Simon compared his genus *Tephrolesbia* only with "*Lesbia*" (=*Aglaiocercus*) and did not state how it differed from *Polyonymus* which he placed in a quite different "group." Until more specimens of the present bird are available for comparison I am unable to examine the genus critically.

Metallura phoebe (Delattre and Lesson).

O(rnysmia) phoebe DELATTRE and LESSON, Rev. Zool., **2**, p. 17, 1839—Andes of Perú = probably highlands of Junín (Delattre coll.); Paris Mus.

Tr(ochilus) opacus TSCHUDI (ex LICHTENSTEIN MS.), Arch. Naturg., **10**, (1), p. 296, 1844—Perú = probably highlands of Junín (B. Philippi coll.); Berlin Mus.

Trochilus cupricauda GOULD, P. Z. S. London, **14**, p. 87, 1846—"Bolivia" = Palca, Tacna, Perú; British Mus.

Metallura jelskii CABANIS, Journ. Orn., **22**, p. 99, 1874—"(Maraynioc?)"; Berlin Mus.

Two males from La Quinua, May 15, 1922; a male and a female from Cullcui, Marañón River, December 10 and 12.

Compared with a male from Cajamarca.

The measurements given by Cabanis for his *jelskii* are slightly larger than those of the present series but the coloration appears to agree. Cabanis compared only the size of his bird with that of *opaca* (which probably came from the same general region) so that his diagnosis is not very informative. Recent authors have been unable to recognize more than one form.

Metallura tyrianthina septentrionalis Hartert.

Metallura smaragdinicollis septentrionalis HARTERT, Novit. Zool., **6**, p. 73, 1899—Perú = Huamachuco; Tring Mus.

Five males and two females from the mountains near Huánuco, 10,500 feet, June 1–14, 1922; three males and one female from Panao, July 4–15.

Compared with two females from Molinopampa; also with a male and two females of *quitensis* from "Ecuador"; a male topotype of *"peruviana"* (=*smaragdinicollis*) from Ccachupata, Perú, and a female from Bolivia; a small series of both sexes of *tyrianthina* from Páramo de Tamá, Venezuela and Colombia, and Santa Elena, Santa Isabel, and Bogotá, Colombia; and a series of *oreopola* from the Mérida region of Venezuela.

While all the Huánuco and Panao birds are not clearly separable from the topotype of *peruviana* (which Hartert synonymized with *smaragdinicollis*), several of them are referable to Hartert's *septentrionalis*, having the pale subterminal portions of the pectoral feathers rather broadly exposed. Probably this series represents an intermediate condition showing affinities to both neighbors. The females are rather more deeply rufescent on the breast than either

the Molinopampa or Bolivian specimens; two are lightly spotted like one of the Molinopampa birds; one is a little more heavily spotted than the other Molinopampa skin. The lightly spotted female from Molinopampa has the tail considerably more bronzy than the other and shows more resemblance in that particular to *quitensis* than to its companion. I follow Hartert, 1922, in placing *septentrionalis* as a subspecies of *tyrianthina*.

Metallura eupogon (Cabanis).

Urolampra eupogon CABANIS, Journ. Orn., 22, p. 97, 1874—Maraynioc, Perú; Berlin Mus.

Metallura Hedvigae TACZANOWSKI, P. Z. S. London, 1874, p. 139, pl. 21, fig. 2—Maraynioc, Perú; Warsaw Mus.?

Five males and three females from the mountains near Huánuco, 12,200 feet, June 21–30, 1922.

Compared with the type of *Laticauda rubriginosa* Cory (=*M. theresiae*) from near Balsas, Perú, and with two young specimens of *M. aeneocauda* from Bolivia.

These three species (and probably others of which I have no material) are closely related to each other, having many characters in common which distinguish them from the *tyrianthina* group, *M. phoebe*, and possibly other congeners. Without specimens of the other related forms it is impossible to discuss these features in detail.

This fiery-throated hummer has been considered rather rare, but I found it not uncommon at the very tops of the mountains near Huánuco and on the slopes immediately below. It inhabited low bushes and plants but a few feet high, often clinging to the under side of the twigs in the manner of a titmouse. On cold, bleak mornings the little creatures were chilled and sluggish in their movements, but regained their customary activity when the sun had dispelled the mists that hung about the hilltops.

Chalcostigma stanleyi versigularis Zimmer.

Chalcostigma stanleyi versigularis ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., 12, p. 52, 1924; Field Mus. Nat. Hist.

Three males (including the type) and one female from the mountains near Huánuco, 12,200 feet, June 26 and 30, 1922.

Compared with a male of *vulcani* from Quispicanchis, Marcapata, Perú (U. S. Nat. Mus.), and five males and one female of *stanleyi* from Ecuador (four in Amer. Mus. Nat. Hist.).

The species was found about the blossoms of certain trees at the margins of the wooded "pockets" at timberline, and also among the low bushes scattered on the hillsides near the streams. It often perched on the tops of the bushes in readiness to dart away at the approach of danger.

Aglaiocercus kingii smaragdinus (Gould).

Trochilus smaragdinus Gould, P. Z. S. London, **14**, p. 85, 1846—Bolivia; British Mus.

Cynanthus bolivianus Gould, Ann. Nat. Hist., (5), **5**, p. 489, 1880—Bolivia; British Mus.

Three males from Chinchao, October 23 and November 20, 1922.

Compared with a male from Poco Tambo, Perú, a male and female from "Bolivia" (Buckley coll.), and a male from Roquefalda, Bolivia; also with seven males and a female of *coelestis* from Mindo, Gualea, and "Ecuador"; six males and a female of *mocoa* from Baeza, Río Pastaza, and "Ecuador," and La Candela, Colombia; two Bogotá skins of *emmae;* nine males and five females of *kingii* from "Bogotá"; and eleven males of *caudata* from Sierra, Nevados, Río Chama, and Río Mucujón, Venezuela.

The specimens from Bolivia to Poco Tambo, Perú, show little variation among themselves and all are referable to *smaragdinus.* This is closest to *mocoa* among the related forms.

It becomes necessary to provide a new name for the present genus owing to the fact that the various names previously applied are all unavailable. *Cynanthus* Swainson, 1827 (Philos. Mag., n. s., **1**, p. 441, 1827), type *C. latirostris* Swainson (cf. Stone, Auk, **24**, p. 192, 1907), preoccupies the name *Cynanthus. Cyanolesbia* Stejneger was proposed as a new name for *Cynanthus* Swainson, 1837 (Classif. Birds, **2**, p. 330, 1837), type, by monotypy, *T. forficatus* Linnaeus =*Trochilus polytmus* Linnaeus; therefore *Cyanolesbia*=*Trochilus* Linnaeus, 1758. *Lesbia* Lesson, 1833 (Troch. Index Gen., p. XVII, 1833) contained three species, *sapho, nuna,* and *kingii.* Gray three times designated *Trochilus forficatus* Linnaeus as type species under the mistaken notion that *kingii* was a synonym, but since *forficatus* was not among the original species, these designations are invalid. Salvin (Cat. Birds Brit. Mus., **16**, p. 146, 1892) seems to have been the first to comply with modern requirements when he designated *nuna* as the type of *Lesbia.* Incidentally this requires the use of *Lesbia* for the genus known recently as *Psalidoprymna,* but it leaves the present genus without a name. To supply the deficiency I

propose the name *Aglaiocercus* with *Ornismya kingii* Lesson as type species.

Rhodopis vesper vesper (Lesson).

Ornismya Vesper LESSON, Hist. Nat. Ois.-Mouches, pp. XV, 85, pl. 19, 1829—"Chili" (possibly Tarapacá but possibly s. w. Perú); Paris Mus.

A male and a doubtful male from Santa Eulalia, April 23 and 24, 1922.

Compared with a male from Islay, Arequipa, Perú, and two males and two females from Pica, Tarapacá, Chile; also with seven males of *atacamensis* from Caldera, Chile.

The Tarapacá males have slightly longer bills than the Peruvian males, probably indicating an approach toward the still smaller *atacamensis*.

The species was found about certain flowering cacti on the arid hillside.

Thaumastura cora Lesson and Garnot.

Orthorhynchus Cora LESSON and GARNOT in DUPERREY, Voy. Coquille, Zool., pl. 31, fig. 4, 1827—(in later text) between Callao and Lima, Perú; Paris Mus.?

Thaumastura cora montana CORY, Field Mus. Nat. Hist. Publ., Orn. Ser., **1**, p. 286, 1913—Hacienda Llagueda, northeast of Otuzco, Perú; Field Mus. Nat. Hist.

T(haumastura) Cora var. *cyanescens* SIMON, Hist. Nat. Troch., p. 224, 1921—Tulpo, Perú; Simon coll., Paris.

Five males from Matucana, April 28 and May 1, 1922; a female from Santa Eulalia, April 23; a probable female from Chosica, April 16.

Compared with a male from Maynapall; two males from Callahuate, a male from "Perú" (Delattre skin, probably from near Lima), and the type of *montana* from Hacienda Llagueda.

The type of *montana* has a little less of the bluish reflections on the side of the throat than the other skins, but a few feathers show the same bluish tone; the Callahuate and Maynapall specimens are from the same general region and are perfectly typical *cora*. The other characters mentioned by Cory are perfectly normal characteristics of the species, the author having been misled by the old and faded Delattre skin which he used for comparison. Simon's "var. *cyanescens*" is nothing but an individual variant which the author

picked out from several skins taken at the same locality, the rest of which were normal. It could not have been intended as a geographic subspecies.

Calliphlox amethystina (Boddaert).

Trochilus amethystinus BODDAERT, Tabl. Pl. Enl., p. 41, 1783—based on DAUBENTON, Pl. Enl. 672, fig. 1; Cayenne.

T(rochilus) Ruficaudus VIEILLOT, Tabl. Ency. Méth., Orn., 2, p. 573, 1822—Amérique méridionale; Laugier coll.?

T(rochilus) Minullus VIEILLOT, t. c., p. 574, 1822—Brazil; Laugier coll.?

Ornismya amethystoides LESSON, Troch., p. 79, pls. 25–27, 1832—Brazil.

Ornismya orthura LESSON, Troch., p. 85, pls. 28, 29, 1832—Cayenne; Amer. Mus. Nat. Hist.

Calliphlox roraimae BOUCARD, Hum. Bird, 1, p. 30, 1891—British Guiana; Paris Mus.

Two males from Vista Alegre, August 18 and 30, 1922.

Compared with fifty-one additional specimens from Cayenne (including the types of *Ornismya orthura*), British Guiana (Mt. Roraima and Merume Mts.), Venezuela (San German de Upata, Azulita, Sierra de Carabobo, Sacupana?, La Bomba, San Felix, and El Callao), and Brazil (Chapada, Minas Geraës, Tury-assú, Tranqueira, Descalvados, and Rio?) (twenty-four skins in Amer. Mus. Nat. Hist.; twenty-two skins in Carnegie Mus.).

A very careful study of this material has shown several interesting facts with reference to the sequence of plumages. Immature examples of both sexes have the tail tipped with white; adult females have the tail tipped with cinnamon-rufous; adult males have a long forked tail, sometimes with traces of white tips on the outer rectrices; young males may acquire the amethystine gorget before the long tail or may develop the forked tail first. Two specimens from San German de Upata, Venezuela (Carnegie Mus.) have the long feathers of the tail just appearing while the throat patch is undeveloped. Apparently adult males with the full gorget but with a short, white-tipped tail were described as *Ornismya orthura*, but the types of *Ornismya orthura* are not fully adult; one has the gorget still showing traces of brownish feathers on the lateral borders; the other has only a few amethystine feathers on the throat which is spotted with brown centrally. Both have traces of cinnamon on the flanks as do other short-tailed birds with a full gorget, while the same condition is shown by long-tailed birds with undeveloped gorget; fully adult males have lost the cinnamomeous tinge and have green flanks.

The two Peruvian birds have longer bills and narrower white breast bands than the Venezuelan and Guianan specimens but a larger series will be required to establish the constancy of this difference.

Myrtis fanny (Lesson).

Ornismya fanny LESSON, Ann. Sci. Nat., (2), 9, p. 170, 1838—"Mexique," errore.

Ornismya labrador BOURCIER, Ann. Sci. Phys. Nat. Agric. Lyon, 2, p. 389, 1839—"Mexique," errore.

Thaumastura francesiae SCLATER, Cat. Amer. Birds, p. 299, 1862—nom. emend.

A male from Cullcui, Marañón River, December 15, 1922; a female from Chosica, April 16.

Compared with two adult males, three young males, and three females from Macate, a female from Trujillo, and a female from Chachapoyas, Perú, and two males and a female from "Ecuador" (ex Buckley). The Ecuadorian males seem to be a slight tint lighter and redder on the lower part of the gorget than the Peruvian specimens, and their bills are 16 and 17½ mm. long as compared with 17½ and 18 for the three adult Peruvian males, but the series is too small to show the value of this variation. The Ecuadorian female is somewhat more deeply rufescent below than the corresponding Peruvian females.

Chaetocercus bombus Gould.

Chaetocercus bombus GOULD, P. Z. S. London, 1870, p. 804—Citado, Ecuador; British Mus.

A female from Chinchao, October 22, 1922.

Compared with a topotypical male and a female from between Chimborazo and Chimbo, Ecuador.

The Chinchao female is more bronzy green above and more deeply rufescent below than the Ecuadorian female, and is a little larger in all measurements.

Chaetocercus mulsanti (Bourcier).

Ornismya Mulsanti BOURCIER, Ann. Soc. Phys. Nat. Agric. Lyon, 5, p. 344, pl. 20, 1842—Colombia.

A male and two females from Chinchao, October 23 and November 16, 1922.

Compared with a male from Quito, Ecuador, a female from "Bolivia," and two males and three females from Bogotá, Colombia.

No differences are noticeable among these specimens.

The species was taken from about the flowers of the "pacay" trees where they occurred in company with *C. bombus* and a clear-winged moth which was sometimes difficult to distinguish from the birds at a little distance.

Trogonurus collaris collaris (Vieillot).

Trogon collaris VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., 8, p. 320, 1817—Cayenne.

Two males and two females from Huachipa, September 20–26, 1922.

Compared with three males and a female from Tobago, a male "Orinoco" skin, a male "Bogotá" skin, and a female from Maracay, Venezuela.

There are certain differences apparent between the Peruvian specimens and the rest of the series, principally in the narrower black bars on the outer rectrices and the smaller black throat patch, but without much more material, including specimens from Cayenne, I am unable to determine the value of these characters.

The species was heard rather commonly in the tropical forest at Huachipa and responded rather readily to an imitation of its song. This was easily imitated, being a clearly whistled, "who-ít, keé-oo, hé-oo-hé-oo-hé-oo-hé-oo-hé-oo." The males would reply at once and would often approach closely overhead, sometimes remaining for a long time but otherwise disappearing when their curiosity was satisfied. Once I had five males in the trees about me at the same time. Occasionally a female also would approach. The females uttered a sudden, explosive, "chirr-rr-rr" accompanied by a jerk of the tail from dependent vertical to horizontal, while the neck was quite extended, not shortened as in positions of rest.

Trogonurus rufus devillei Cabanis and Heine.

?A(ganus) (*Pothinus* in text) *Devillei* CABANIS and HEINE, Mus. Hein., **4**, (1), p. 191, 1863—based on *Trogon meridionalis* DEVILLE and DES MURS (nec SWAINSON), Rev. Mag. Zool., (2), **1**, p. 333, 1849; Santa Maria (= south of Pebas, Péru?); type no longer in Paris Mus.?

An adult and a young male from Puerto Bermúdez, March 17 and 15, 1923.

Compared with three specimens of *rufus* from British Guiana, fifteen of *tenellus* from Costa Rica, one *cupreicaudus* from w. Colombia, and one *chrysochlorus* from São Sebastião, São Paulo, Brazil.

The Puerto Bermúdez adult male differs from the males of the other races at hand in the beautiful coppery color of the tail. This is as described for *cupreicaudus* from Colombia. The specimen of that race at hand shows little trace of coppery and therefore must be atypical, and I am unable to say how the form may differ from *devillei*.

The type locality, Santa Maria, is given by Deville and Des Murs without more definite allocation than that it is the same general region as Ega, on the Yaguas River on the right bank of the upper Amazon. A careful perusal of Castelnau's account of the travels of his expedition has elicited the following information (Expéd. Amér. Sud, Hist. Voyage, **5**, pp. 15–27). Shortly after reaching Pebas, the party accompanied a resident missionary on a visit to his mission station, formerly called "Saint Jose" but then known as "Santa Maria de los Yaguas." This station was two days' travel from Pebas inland (i.e., away from the Amazon, evidently southward). After a short visit there, Castelnau returned to Pebas but Deville remained to make natural history collections. This must be the Santa Maria from which various upper-Amazonian birds were subsequently recorded. At any rate it evidently is in the region to which Puerto Bermúdez bears a close relation through the Ucayali River, and since my specimens agree with the description of Deville and Des Murs as well as with that of Cabanis and Heine, I have no hesitation in referring my specimens to the form in question.

I use the name *rufus* in preference to *curucui* of Linnaeus, which I consider to be misapplied to this species. As claimed by Ridgway (Bull. U. S. Nat. Mus., **50**, pt. 5, p. 764, footn., 1911), Linnaeus based his name principally on Edwards's plate (Gleanings, **3**, pl. 331) which has been accepted as depicting the present species. With this latter contention I am unable to agree. The plate shows too much red on the under parts for any of the *rufus* group and while it is not so bright as is shown by the red-bellied species in full, fresh plumage, a red specimen sometimes fades to a degree that is quite comparable to the plate. I have before me a specimen of *aurantiiventris* from Costa Rica (Field Mus. No. 24,223) which has the belly faded to Salmon Orange with traces of Bittersweet Orange, matching Edwards's picture very closely and showing to what extent the color of a red-bellied species may change. Further than this, Edwards describes the upper wing-coverts as a light ash color with very fine

black lines making a mixed gray color. In both *rufus* and *collaris*, the two species to which the name *curucui* has been applied by various authors, the color rather is black with fine white lines which are large enough to be distinct as such, whereas in the *variegatus* group the arrangement is exactly as described by Edwards and the general effect of the extremely fine black lines on an ashy ground is that of a mixed gray color. For these reasons I believe that Edwards figured a faded specimen of the *variegatus* group; I am certain that he did not show the present species. I am quite in favor of dropping the name *curucui* as being of composite origin, possibly unidentifiable, and without type locality.

Chloroceryle americana americana (Gmelin).

(*Alcedo*) *americana* GMELIN, Syst. Nat., 1, (1), p. 451, 1788—based on DAUBENTON, Pl. Enl. 591, figs. 1, 2; Cayenne.

Two males and three females from Huánuco, July 28–August 10, 1922.

Compared with sixty-four additional skins from various parts of South America, representing several subspecies, as listed in the appended table.

The Guianan and Serra da Lua males are smaller than any of the others (wing 74 and 73 mm.); two males from Maranhão and one from Piauhy, Brazil, are slightly larger (wing 77, 77, 78); a male from Descalvados, Brazil, is still larger (wing 79); a male from Lake Valencia, Venezuela, matches the Descalvados bird; one from Buenavista, Bolivia, also matches it; and the males from Moyobamba and Lagunas, Perú, match the Maranhão specimens. All these males agree, furthermore, in having the white throat patch comparatively short, rather sharply defined against the rufous chest, and bounded laterally by well-marked dark malar stripes (not so well-marked in the Descalvados and Moyobamba specimens). The females from Guiana, Brazil, Venezuela, and northern Perú are not as small as the males but most of them have the dark malar stripes just as strongly marked. These birds, therefore, may be taken to represent typical *americana*, which seems to range over the Amazonian country from Guiana and Venezuela to southern Brazil, northern Bolivia, and northern Perú.

Three Uruguayan males have the wing 77, 78, and 80 mm.; eight Argentine males measure 78, 79, 79, 80, 80½, 80½, 81, 84. In addition to their smaller size, these birds show a larger extent of white on the throat, without very pronounced malar stripes and

blending more gradually into the rufous of the breast. Females from the same regions are distinguished principally by the usual lack of pronounced malar stripes. It seems probable that this series can be separated under the name *mathewsii* (Laubmann, 1927—new name for *Alcedo viridis* Vieillot, nec Meuschen, 1787). Specimens from southern Bolivia may be intermediate between *mathewsii* and *americana*.

The Huánuco males agree well with the series of *americana* in the extent of the white throat patch and comparatively well-marked malar stripes, but are unusually large (wing 83, 85 mm.). They can not be referred to *mathewsii* and I conclude that they are *americana* with a tendency toward the size of *cabanisii* of the Pacific coast region of Perú.

Three males from Huacho, Dept. Lima, Perú, are typical *cabanisii* and are large (wing 84, 85, 85) with the white throat patch even larger than in *mathewsii* but rather sharply defined against the rufous of the breast as in *americana*. The females from this region are even larger on average (wing 84, 85, 87, 87) but are not clearly separable from the large examples of *mathewsii* except by distribution.

A single male from Cartagena, Colombia, might be referable to *mathewsii* if it were not cut off from the range of that form by the interposition of *americana*, but it agrees even better with specimens of *isthmica* and probably represents an intermediate between that form and *americana*. A Bogotá female completely lacks the dark malar stripes of *americana* and is also referable to *isthmica*. I am unable to recognize Laubmann's *hellmayri*, the characters of which can be found in specimens of both *americana* and *mathewsii*. The comparative absence of dark green spots on the under tail-coverts seems to be due, in part, to immaturity; at least those specimens of the South American subspecies which have a minimum of dark spots are all young birds. In *croteta* the same character is fixed regardless of age.

Specimens examined:

C. a. americana—British Guiana 1♂ 1♀. Surinam: Paramaribo 1♀. Venezuela: Lake Valencia 1♂; Maracay 1♀; Río Mucujón 1♀. Brazil: Serra da Lua 1♂ 1♀; Quixada, Ceará 1♀; Conçeição 1♀; Rosario, Maranhão 2♂; Mangunça Is. 1♀; Tranqueira 1♀; Ibiapaba, Piauhy 1♂; Descalvados 1♂ 1♀. Perú: Lagunas 1♂ 1♀; Moyobamba 1♂; Huánuco 2♂ 3♀. Bolivia: Buenavista, Santa Cruz 1♂.

C. a. mathewsii—Uruguay: Río Uruguay, near Dolores 1 ♂; Arazati, San José 1 ♂ 1 ♀; Polanco, Minas 1 ♂ 2 ♀; Montevideo 1 ♀[1]; San Vicente, Rocha 1 ♀[1]. Argentina: Isla Ella, Delta del Paraná 2 ♂; Río Paranay 1 ♂; Concepción, Tucumán 5 ♂ 5 ♀; Vermejo, Chaco 1 ♂[1]; Las Palmas, Chaco 1 ♀[1]; Conchitas, Buenos Aires 1 ♀[1]. Bolivia: Yacuiba 2 ♂ 1 ♀[2]; Río Surutú, Prov. de Lara 1 ♂ 2 ♀[2]; Río Yapacani, Santa Cruz 1 ♂[2]; Puerto Suarez 1 ♂[2].

C. a. cabanisii—Perú: Santa Eulalia 1 ♀; Lima 1 ♀[3]; Huacho, Lima 3 ♂[3]; Bequeta, Lima 2 ♀[3].

C. a. isthmica—Colombia: Cartagena 1 ♂; Bogotá 1 ♀. Panamá, Guatemala, Nicaragua, Costa Rica, and Honduras 7 ♂ 8 ♀.

C. a. subsp.?—Ecuador: Puente de Chimbo 1 ♀.

Chloroceryle americana cabanisii (Tschudi).

A(lcedo) Cabanisii TSCHUDI, Faun. Per., Aves, p. 253, 1846—Perú; Mus. Neuchâtel.

A female from Santa Eulalia, April 23, 1922.

Compared with three males from Huacho, two females from Huacho, and a female from Lima (all in Amer. Mus. Nat. Hist.); also with the other material listed under *americana*.

The males of this form are separable from those of *americana* and *mathewsii* by having the white throat patch more extensive posteriorly; more sharply defined against the chestnut band across the breast than in *mathewsii*. The size is larger than most examples of the other two forms (wing 85, 85, 84 mm.) but is matched by specimens of *americana* from the interior of Perú (Huánuco) which are not referable to *cabanisii* on account of the differently marked throat. The females are not clearly separable from large examples of *mathewsii* or *americana*. The second outer rectrix has the inner web more extensively white in all the females of this series than in most of the females of *americana* but some of *mathewsii* from Uruguay are even more strongly marked than the series of *cabanisii*. I have been unable to discover any constancy in regard to the spotting of the under tail-coverts or the extent of white on the wings, and conclude that the separation of the present form must be on the basis of the characters of the males.

[1] Specimens in United States National Museum, Washington.
[2] Specimens in Carnegie Museum, Pittsburgh.
[3] Specimens in American Museum of Natural History, New York.

Galbula tombacea cyanescens Deville.

Galbula cyanescens DEVILLE, Mag. Zool., (2), 1, p. 56, 1849—"le bords de l'Amazone" = Sarayacu, Ucayali R., Perú; Paris Mus.

One male from Huachipa, September 19, 1922; three males from Vista Alegre, August 31; one male from Río Colorado, Chanchamayo Valley, February 1, 1923; and one male from Puerto Bermúdez, March 8.

Compared with three males from Moyobamba and a male and female from Rioja; also with a specimen of typical *tombacea* from Bogotá.

One of the Huachipa examples has broad dusky tips on the metallic feathers of the crown. The Vista Alegre and Río Colorado birds are similarly marked to a lesser degree, and most of the other examples show one or more feathers on the top of the head with fine dusky tips, but there is no complete brownish area as in the specimen of *tombacea*. There is an unusual amount of coppery reflection on the birds from Vista Alegre and Río Colorado while the Moyobamba and Rioja birds average greener, but as this color is variable in the rest of the series and is subject to some post-mortem change, it probably is of no diagnostic value.

One bird at Vista Alegre was seen entering a burrow in the cut bank along a hillside trail where it apparently had a nest under construction.

Galbula albirostris chalcocephala Deville.

Galbula chalcocephala DEVILLE, Rev. Zool., (2), 1, p. 55, 1849—Sarayacu, Ucayali R., Perú; Paris Mus.

Two males from Puerto Bermúdez, March 10 and 19, 1923.

Compared with three males and one female of *G. a. albirostris* from British Guiana.

The Peruvian birds are easily separable by the more extensively black maxilla, the more extensive and deeper purple cap, the deeper rufous under parts and tail, and the less extensive greenish edges on the outer rectrices. One of my specimens has the sides of the chin spot broadly black within the mandibular rami; in the other there are only faint traces of blackish tips on the sides of the chin although the malar apex is as blackish as in *albirostris*.

Ecchaunornis striolatus (Pelzeln).

Bucco striolatus PELZELN, Sitzb. Akad. Wien, 20, p. 509, 1856—Engenho do Cap Gama (Matto Grosso, Brazil); Vienna Mus.

One male from Chinchao, November 8, 1922.

Compared with a specimen from Chanchamayo, Perú.

The Chanchamayo bird is much darker ochraceous on the throat and chest, with a pinkish suffusion on the lower breast and sides, while the dusky bars on the tail are confluent, leaving the russet markings isolated as marginal indentations instead of complete bars. The Chinchao bird is pale cream buff on the throat and breast and has the bars of the tail complete. It has a shorter bill but longer wing and tail than the Chanchamayo specimen.

On comparing this species with *Ecchaunornis radiatus fulvidus*, *E. chacuru chacuru* and *Nystalus maculatus*, it appears that *striolatus* belongs rather to *Ecchaunornis* than to *Nystalus*. It agrees well with the characters given by Ridgway for *Ecchaunornis* but is excluded from *Nystalus* because of its bill which is less than two-fifths as long as the wing and in width at nostrils is more than one-third the length of the exposed culmen. In actual appearance the bill is shorter, stouter, and more abruptly hooked than in *Nystalus maculatus* and its races.

The Chinchao specimen when shot was in solitary occupation of a lofty perch in the top of a tall, dead tree standing in an open clearing.

Malacoptila fusca (Gmelin).

(*Bucco*) *fuscus* Gmelin, Syst. Nat., **1**, (1), p. 408, 1788—based on the White-breasted Barbet of Latham; Cayenne; type lost.

An adult male from Vista Alegre, August 28, 1922.

Compared with a male from Pozuzo, Perú.

The two birds examined agree in most details except that the specimen from Pozuzo has the lores extensively white and the bases of the chin feathers and the inner basal margins of the remiges more buffy. The Vista Alegre bird when freshly killed had the bill black at the tip and bright orange at the base; iris vermilion; eyelids olive green; feet yellowish green.

The species was found in the tropical zone forest.

Malacoptila fulvogularis fulvogularis Sclater.

Malacoptila fulvogularis Sclater, P. Z. S. London, **21**, p. 123, 1853—Bolivia; British Mus.

?*Malacoptila fulvigularis melanopogon* Berlepsch and Stolzmann, P. Z. S. London, 1902, (2), p. 37—Garita del Sol, Perú; Frankfort Mus.

One female from Huachipa, September 18, 1922.

Compared with two males of "*melanopogon*" from Bolivia, four females and one male from Santo Domingo, s. e. Perú, one female from San Miguel, Urubamba Valley, a male and a female from San Ignacio, n. Perú, and a specimen without sex from Cutucuo, Ecuador (all in Amer. Mus. Nat. Hist.).

No satisfactory arrangement appears possible without referring all the specimens to *fulvogularis*. The Santo Domingo birds are not clearly distinguishable from Bolivian skins; the San Miguel bird has the pectoral stripes clearer white, less tinged with buff than any of the others; the Huachipa bird is the darkest of the series; the San Ignacio specimens have the throat and chest brighter and clearer and the pectoral stripes broader and more narrowly margined with dusky, and have the upper wing-coverts more broadly striped with buff; the Ecuadorian skin is most like one of the Santo Domingo birds. The markings on the mantle vary from sharp, whitish streaks to buffy spots which terminate narrow, dull hair lines, but without geographic significance. Similarly the forehead and lores vary among clear white, dull brownish, and light yellowish buff, with all types present in the series from Santo Domingo. It is thus impossible to recognize *melanopogon*, and the likelihood of the distinctness of Sclater's *substriata* (from "Nova Grenada") is lessened by the evident variability of the species as shown in the present series.

Nonnula ruficapilla ruficapilla (Tschudi).

L(ypornix) ruficapilla TSCHUDI, Arch. Naturg., **10**, (1), p. 300, 1844—Perú; Mus. Neuchâtel.

An adult male and a female in first annual plumage from Vista Alegre, August 22 and October 14, 1922.

No material for comparison.

The adult male is somewhat different from the figure of a specimen from the Ucayali given in Sclater's Monograph of the Jacamars and Puff Birds (pl. 46, fig. 1). In the figure the gray superciliary line is broad and distinct over the entire orbit, the eyelids are not brightly colored, and the crissum is white. In my specimen the superciliary line is all but obsolete on the upper anterior margin of the eye, leaving the gray lores and the gray postocular space connected above the eye by an exceedingly narrow gray line on the very fringe of the eyelid; the skin of the eyelid is slightly expanded and in life was bright orange vermilion; the under tail-coverts are ochraceous buff but not white, agreeing better with Tschudi's poor figure in the Fauna Peruana (Aves, pl. 24, fig. 1) and his description

of "Steiss falb." The bill in life was bright blue at the lower base and otherwise black; feet olive brown.

Tschudi's plate shows no superciliary line whatever but represents the rufous of the crown coming down to the middle of the orbit in front and rear. It is possible that this feature is variable, that the specimen figured by Tschudi was imperfect, or that the differences are racial. More material is necessary before any conclusions are possible.

The immature female is paler below than the adult male, and darker on the crown, with undeveloped bill and other characters of immaturity. It agrees with the adult in the matter of buff crissum and reduced superciliary stripe.

The species was found in low thickets and weed patches along the roadside at the edge of the tropical forest.

Monasa morphoea peruana Sclater.

Monasa peruana SCLATER, P. Z. S. London, **23** (for 1855), p. 194, Jan. 22, 1856—Chamicuros, Perú; British Mus.

A male and female from Huachipa, September 11 and 6 (respectively), 1922; a male and female from Puerto Bermúdez, March 16 and 14, 1923.

Compared with a topotype of *peruana*.

All the examples agree well, with slight variations among themselves in the sootiness of the crown and throat and the extent of white on the face. The Chamicuros bird has a slightly more bluish (less greenish) gloss on the tail, a more orange (less reddish) bill (possibly owing to post-mortem change), and shorter wings and tail than the other specimens. However, judging from measurements of two Yurimaguas birds given in Berlepsch's manuscript notes, the difference in size is purely individual.

This species was found in small flocks in the forest, moving in straggling flight from tree to tree when pursued, or congregating in the branches like migrating blackbirds. Its note is a noisy scream.

Capito auratus punctatus (Lesson).

Bucco punctatus LESSON, Traité d'Orn., p. 165, 1830—no locality; Buena Vista, Colombia, suggested by CHAPMAN, 1928; type?

Capito aurifrons VIGORS, Proc. Comm. Sci. and Corr., Zool. Soc. London, **2**, p. 3, 1832—"Chili" = Perú; type lost.

Two males from Vista Alegre, August 26 and 30, 1922; four males and two females from Huachipa, September 14–October 2;

one female from the Río Colorado, Chanchamayo Valley, February 2, 1923.

Compared with a male and female from Moyobamba, a male from Pozuzo, and a male of *auratus* from Pebas, Perú.

There is a slight amount of variation in the series but it is purely individual. There are faint traces of red on the forehead of one or two of the males and the exact tint of orange on the throat and that of yellow on the crown are variable. The females from Huachipa seem to match Chapman's description of a Río Napo female in that the throat spots are crescentic and subterminal rather than guttate and terminal, while the margins of the feathers on the rump are terminal rather than lateral. The Río Colorado female more nearly answers the description of the typical female although it suggests the characters of the variant.

A female from Moyobamba is more heavily spotted on the breast and flanks but more lightly marked on the throat than any of the Huachipa birds. A male from the same locality has the throat lightly tipped with blackish points and the breast has faint blackish terminal bars, more strongly indicated than in any of the other males.

Vigors's *Capito aurifrons*, described from "Chili" (at the same time as *Aglaïa chilensis* which also must have come from Perú), must be a synonym of *punctatus* since the description agrees well with the female of *punctatus* with strongly spotted throat.

The Huachipa birds were found among the mixed species of the vagabond troops in the tropical forest.

Eubucco versicolor steerii (Sclater and Salvin).

Capito steerii SCLATER and SALVIN, P. Z. S. London, 1878, p. 140, pl. 12—Moyobamba, Perú; Mus. Univ. Michigan, Ann Arbor.

One male from Vista Alegre, August 16, 1922; two males and two females from Huachipa, September 11–October 5.

Compared with a male of *versicolor* from Omeja, Bolivia (Amer. Mus. Nat. Hist.), and a male of *glaucogularis* from Chanchamayo, Perú.

While well marked racially, *steerii* appears to be only the northern representative of *glaucogularis* which, in turn, is a subspecies of *versicolor*. Berlepsch and Stolzmann (Ornis, **13**, (2), p. 98, 1906) record typical *versicolor* and so-called hybrids of that form with *glaucogularis* from the same locality, Idma, Perú. These supposed

hybrids were described as having the malar stripe blue mixed with yellow or else with a narrow line of yellow along the upper margin of the blue stripe; otherwise they were like *glaucogularis*. Chapman (Bull. U. S. Nat. Mus., **117**, p. 74, 1921) notes two out of three examples of *versicolor* from Idma as showing a similar approach to *glaucogularis*. I believe that all these intermediate specimens indicate intergradation. On the other hand, the specimen of *glaucogularis* at hand has a faint tinge of bluish on the posterior auriculars, showing a tendency toward *versicolor*.

Of my three males of *steerii*, one from Huachipa shows an approach toward *glaucogularis* from the opposite direction. The breast, normally yellow, has a noticeably bluish tone immediately behind the red throat, and about eight millimeters below this there is a row of fine but distinct orange dots across the breast in the exact position of the orange band in *glaucogularis*. Since the locality is between Moyobamba and Chanchamayo, it is natural that intergrades should be found in this region if the forms are subspecifically related.

I have seen no females of *versicolor* and *glaucogularis*, but from descriptions I judge that they are very similar to my specimens of female *steerii* with, perhaps, a little broader band of red across the chest. Of my two females, one has the blue of the head rather deeper than the other, with blue tinging the breast below the crimson band, and there is a fine speck of red on the lower breast which is wanting in the second bird. The paler-headed example has a small touch of red above the right eye and the yellow behind the ear-coverts is slightly less orange than in the first example.

The species was found in the tropical zone forest.

Ramphastos ambiguus ambiguus Swainson.

Ramphastos ambiguus SWAINSON, Zool. Ill., (1), **3**, pl. 168—no loc.; Buena Vista, Colombia, suggested by CHAPMAN, 1917.

A female from Huachipa, September 7, 1922.

Compared with two Bogotá skins.

The Peruvian specimen has the anterior upper parts much less maroon reddish than the Bogotá skins; probably this is a sexual difference. Otherwise the birds agree well with each other in all but size in which there is great variation, the Bogotá birds being at the two opposite ends of the scale.

The "Dios-te-de" was not uncommon at Huachipa in the heavy tropical forest, in spite of which only one specimen was taken. The

song, interpreted by the local residents as "Dios-te-de" sounded more like "kiúk-ke-kiúk," and was accompanied by regular movement of the head. At the first syllable the head was thrown back vigorously to a nearly vertical position and then lowered more slowly to the horizontal where it rested at the close; the tail was carried up at an angle of about forty-five degrees.

Ramphastos monilis cuvieri Wagler.

R(amphastos) Cuvieri WAGLER, Syst. Av. Gen., sign. 1, *Ramphastos*, sp. 5, 1827—"Brasilia versus flumen Amazonum"; Munich Mus.

?Ramphastos Inca GOULD, P. Z. S. London, **14**, p. 68, 1846—Chimoré, Bolivia; Liverpool Mus.

A female from Puerto Bermúdez, March 10, 1923; a male from Tingo Maria (collected by E. Heller), October 19, 1922.

Compared with a Bogotá skin of *cuvieri;* also with three males of *monilis* from the Rio Cumarapy and Rio Xingu, Pará, Brazil; and four skins of *aurantiirostris* from British Guiana and Surinam.

The Bogotá skin is old and the bill faded, but there is a pale spot on the side of the maxilla that may once have been reddish. The Tingo Maria skin has the bill very like that of the Bogotá specimen. The Puerto Bermúdez specimen has this pale area still distinctly reddish; when freshly killed it had the spot brighter and more distinct though much smaller than is indicated for "*inca*" in Gould's plate in the Monograph of the Ramphastidae. Chapman (Bull. Amer. Mus. Nat. Hist., **36**, p. 330, 1917) notes indications of red on the bills of three out of five Colombian skins of *cuvieri*. Berlepsch and Hartert (Novit. Zool., **9**, p. 99, 1902) record a skin of "*inca*" from Munduapo, upper Orinoco, and apparently refer Peruvian birds to the same form. In the three skins of *monilis* at hand, one (from the Rio Cumarapy) has the largest part of both maxilla and mandible reddish; another (from the Rio Xingu) has the red areas somewhat reduced but still noticeable for most of the length of the maxilla and visible clearly on the sub-basal half of the mandible; the third (from the Rio Xingu) has the red still more reduced and about as extensive as shown in the plate of *inca*. All this seems to indicate that the type of *inca* was a very brightly marked *cuvieri* or a poorly marked *monilis*, being intermediate between the normal plumages of these two subspecies. It is doubtful if it represents a fixed form with a definite distribution unless there are other characters for it than the exaggerated reddish spot on the side of the bill. The single Bogotá skin at hand has the culmen straighter than in the two

Peruvian birds, but I do not know if this difference is characteristic or otherwise.

Ramphastos vitellinus culminatus Gould.

Ramphastos culminatus GOULD, P. Z. S. London, 1, p. 70, 1833—"Mexico"; Colombia suggested by BRABOURNE and CHUBB, 1912; British Mus.

A female from Puerto Bermúdez, March 11, 1923.

Compared with a male from Yurimaguas, Perú, a male and a female from Buenavista, Santa Cruz, Bolivia, and a female from Río Guachi, Santa Elena, Venezuela; also with three skins of *vitellinus* from British Guiana; one skin of *theresae* from Inhuma, Alto Parnahyba, Maranhão, Brazil; and three males and three females of *ariel* from Tury-assú, Maranhão and Joinville, Santa Catharina, and from the Rio Xingu, Brazil.

These forms, together with *osculans* which I have not seen, form a well-marked specific group distinguishable from the other South American species by the curious concavity on each side of the maxilla below the culmen, which is exactly the same in all the forms mentioned, as is the general shape and coloration of the bill and the style of coloration of the plumage. Certain differences in details of coloration are bridged by individual variation. For example, *vitellinus* and *ariel* have the upper tail-coverts deep red; *theresae* has them light yellow; *culminatus* has them sometimes pale yellow, usually deep orange, and sometimes orange tipped with red. The throat is deep orange in *ariel;* chrome yellow with pale lateral borders in *theresae;* orange centrally in *vitellinus,* with chin, sides of face and a broad malar region nearly white; usually white in *culminatus* though occasionally with the entire lower half of the throat lemon yellow. The red pectoral band varies in width without any sharp delimitation in measurement among the various forms.

According to published accounts, *osculans* is a highly variable form connecting *culminatus* and *ariel.* Berlepsch and Hartert (Novit. Zool., 9, p. 100, 1902) record both *osculans* and *culminatus* from Munduapo, upper Orinoco, but their specimens of *culminatus* were far from uniform and the specimen referred to *osculans* appears to have been only an especially strongly marked individual of the same form as the others. The Orinoco series identified as *culminatus* had the upper tail-coverts varying from yellow to red-tipped orange and the throat from yellow to orange; the so-called *osculans* had the throat orange below and yellow above and the tail-coverts largely red though yellow sub-basally. Many years before, Pelzeln recorded

both *osculans* and *culminatus* from Borba but printed Natterer's notes in which the latter observer stated that he considered the two forms as local varieties of the same bird. The variability of the coloration in *osculans* may prove to be its only claim to separability as a distinct race, a criterion of doubtful value.

The present form, *culminatus*, is strikingly like *R. monilis cuvieri* in the coloration of the plumage and, to a certain extent, in the coloration of the bill, and the two birds occur together over a large extent of territory. However, the resemblance is superficial and the two birds belong to quite distinct specific groups, the other members of which do not show the similarity exhibited by these two.

Selenidera langsdorffii (Wagler).

P(teroglossus) Langsdorffii WAGLER, Syst. Av., sign. 1, *Pteroglossus* sp. 12, 1827—Brazil; Munich Mus.

A male from Vista Alegre, August 30, 1922; a female from the Hacienda Buena Vista, Río Chinchao (collected by E. Heller), September 2.

No other specimens for comparison.

This species was known locally as "Tabaquero."

Aulacorhynchus derbianus derbianus (Gould).

Aulacorhamphus derbianus GOULD, P. Z. S. London, 3, p. 49, 1835—"Cordilleran Andes"; Liverpool Mus.?

Two males from Huachipa, September 3 and October 4, 1922.

Compared with a female from Chanchamayo.

This species appears to have no very close relatives among its congeners. It was known locally as "Lechero."

Colaptes rupicola cinereicapillus Reichenbach.

Colaptes cinereicapillus REICHENBACH, Hand. Spec. Orn., lief. 6, p. 416, pl. 680, figs. 4489–90, 1854—"Guayabamba," n. Perú; Dresden Mus.

Colaptes stolzmanni TACZANOWSKI, P. Z. S. London, 1880, p. 209—Cutervo, n. Perú; formerly Warsaw Mus., now lost.

Two males and one female from the mountains near Huánuco, 12,200 feet, June 20–26, 1922; two males and one female from Huánuco Viejo, 12,700 feet, December 19.

Compared with a small series from Cajamarca, Hacienda Llagueda, and near Balsas, n. Perú; also with three specimens of *puna* from Junín.

The Huánuco birds agree fairly well with the north-Peruvian specimens. The two males from Huánuco Viejo are much paler below than any of the others but they are also much worn. The female from the same locality is like the Huánuco female. The north-Peruvian skins may average a little darker below and the Huánuco and Huánuco Viejo examples a little yellower, but the Cajamarca bird (which is slightly immature) is like the Huánuco specimens.

Both males from Huánuco have distinct traces of red on the nape and the female from that locality has the pectoral bars short, not reaching the lateral margins of the feathers. These characters show close approach toward *puna*. Ménégaux (Bull. Soc. Philom. Paris, (10), **1**, pp. 207–209, 1909) has shown that *puna* intergrades with *rupicola*.

This flicker is a common bird in the lightly wooded and open portions of the Andean table-land. I found it to be very wary and alert and therefore difficult to stalk. Its favorite perch was on some of the huge boulders which lay on all sides and it usually managed to keep most of the rock between itself and its pursuer, jerking its body erect to peer over the upper edge and ready to take flight when it deemed the danger too imminent. It was seen frequently winging its undulating flight over the open hilltops, displaying the prominent white rump as a conspicuous field mark. Its voice and actions were strongly suggestive of the North American flickers of which it is the southern representative.

Hypoxanthus rivolii brevirostris Taczanowski.

Hypoxanthus brevirostris TACZANOWSKI, P. Z. S. London, 1874, p. 546—Higos (♂) and Chilpes (♀), Perú; formerly Warsaw Mus., now lost.

Hypoxanthus aequatorialis DUBOIS, Bull. Acad. Roy. Belg., 1879, p. 823—Ecuador; Brussels Mus.

Three males and one female from Panao, July 6–16, 1922; a female from Chinchao, November 20.

Compared with two females from Ecuador (one from Hoyaucshi); also with a female of *quindiuna* from "Colombia"; and six skins of *rivolii* from Páramo de Tamá, Colombia and Venezuela.

Judging by descriptions, the Expedition specimens appear to be typical *brevirostris*, although I have no topotypes for comparison. The Chinchao female is not quite adult and shows traces of red tips on some of the feathers of the crown though the malar stripes are entirely black. Possibly this is a tendency toward the characters of *meridae*.

This handsome woodpecker was found in the temperate zone woodland and was quite retiring in its habits. Occasionally one was heard to utter a rolling "chir-r-r-r-r" or a short "ka-weép, ka-weép," but for the most part they were quiet, industrious birds, not often seen or heard.

Chrysoptilus atricollis peruvianus Reichenbach.

Chrysoptilus peruvianus REICHENBACH, Handb. Spec. Orn., Lief. 6, p. 419, No. 985, pl. 680, figs. 4493–94, 1854—Perú = Cutervo (see below); Dresden Mus.

Ch(rysoptilus) chrysonotus BERLEPSCH and STOLZMANN, P. Z. S. London, 1892, p. 386—Callacate, Chachapoyas, Perú; Frankfort Mus.

Chrysoptilus atricollis lymani BANGS and NOBLE, Proc. N. Engl. Zool. Club, 6, pp. 85–86, 1918—Huancabamba, Perú; Mus. Comp. Zool.

A female from Cullcui, Marañón River, December 12, 1922.

Compared with three males and one female of *"lymani"* from Huancabamba (Mus. Comp. Zool.); also with two males of *atricollis* from Menucucho and Hacienda Llagueda, Perú.

The Cullcui and Huancabamba birds differ from the specimens of *atricollis* by having the blackish bars of the dorsal surface broad, equal in width to the interspaces, and the center of the belly quite immaculate, Light Chalcedony Yellow, unbarred. The general tone of coloration is difficult to compare since the yellow pigment appears to fade considerably and becomes nearly white before the feathers are finally shed, and all of the specimens in hand have the plumage mixed with fresh and faded feathers.

Reichenbach's illustration when compared with Malherbe's plate of *atricollis* (Mon. Pic., 4, pl. 88, fig. 4, 1862) shows the broad dorsal barring characteristic of the inland form, and the type in the Dresden Museum (No. 18118) examined by Hellmayr (MS.) confirms the identity of this race with *chrysonotus* and *lymani*. The type locality of *peruvianus*, therefore, may be proposed herewith as Cutervo, which is one of the collecting stations of Warscewicz, the discoverer of the type.

This woodpecker was not uncommon at Cullcui but it was very difficult to get. It was found about the tall cactus stalks in which it appeared to nest, since many holes were seen into which the birds frequently disappeared. A number of other specimens were shot but they were caught by the cactus spines and held in inaccessible security high above ground.

Veniliornis fumigata fumigata (D'Orbigny).

Picus fumigatus D'ORBIGNY, Voy. Amér. Mérid., Ois., pl. 65, fig. 1, 1844; idem, op. cit., p. 380, 1847—type from Yungas, Bolivia; Paris Mus.

Veniliornis oleagineus aureus CHAPMAN, Bull. Amer. Mus. Nat. Hist., **33**, p. 612, 1914—La Sierra, Colombia; Amer. Mus. Nat. Hist.

Veniliornis oleagineus obscuratus CHAPMAN, Amer. Mus. Novit., **250**, p. 1, 1927—Chugur, 40 miles w. of Cajamarca, Perú; Amer. Mus. Nat. Hist.

One male from Huachipa, September 26, 1922; a male and female from Chinchao, November 17 and October 31.

Compared with a skin from near Yala, Jujuy, Argentina; a male and female from Hacienda Limón, Perú; and a female from Páramo de Tamá, Venezuela.

This species appears to be extremely variable in color if not dimorphic, showing both dark brown and golden phases of plumage without relation to distribution. The Argentine example is quite dark throughout, being dark Buffy Brown or Olive Brown on the mantle and under parts, and rather lighter, nearer Saccardo's Umber, on the middle back. The Huachipa specimen is nearly as dark, with faintly reddish tips on the back. The male from Chinchao, southwest of Huachipa, is bright Isabella Color x Honey Yellow on the back and light Saccardo's Umber on the breast. The female from Chinchao is in mixed plumage of faded pale brown and dark brown.

The Hacienda Limón birds are from a locality close to the type locality of *obscurata* but they are much paler and more golden than the Jujuy and Huachipa specimens, though darker and duller than the Chinchao examples, whereas *obscurata* is described as being darker and less golden than *fumigata*. A female from Páramo de Tamá, Venezuela, is even brighter golden than the Chinchao specimen. Chapman already (1927) has announced the invalidity of *aurea* and it seems impossible, in the light of the present material, to maintain *obscurata*. The species apparently varies throughout its extensive range and if divisible it must be on other characters than general coloration.

Size also seems to be variable. Hacienda Limón specimens are largest in the present series, Huachipa and Chinchao skins are smallest, and the Jujuy and Páramo de Tamá examples are intermediate. That these comparisons are not significant is evidenced by the measurements of specimens from other localities given by Chapman (1914) in which similar irregular variation is shown.

The use of the name *fumigata* for the "*oleaginea*" group is necessitated by the fact that *oleagineus* Lichtenstein, 1830, is a

nomen nudum and *oleagineus* Reichenbach, 1854, is antedated by *fumigatus* D'Orbigny, 1847.

Veniliornis nigriceps pectoralis (Berlepsch and Stolzmann).

Dendrobates malherbei pectoralis BERLEPSCH and STOLZMANN, P. Z. S. London, 1902, p. 33—Pariayacu, Maraynioc, Perú; ♀; Frankfort Mus.

A male and female from above Panao, July 17 and 3, 1922.

Compared with a male and three females of *nigriceps* from Incachaca, Bolivia (Carnegie Mus.).

The Peruvian specimens show certain of the characteristics of *pectoralis* as described by Berlepsch and Stolzmann, but other differences mentioned are not constant. The female has the top of the head distinctly olivaceous, not clear black as in *nigriceps;* the postocular stripe is paler yellow and broken into bars posteriorly; the back is more olivaceous (Bright Orange Citrine) and less tinged with red; the dark portions of the under parts are more olive (Buffy Olive) and less brownish; the pale bars on the breast are elongate-cordate, not parallel-edged (although one of the Bolivian females is no different) while the pale bars are narrower than the olive interspaces in both forms; and the under side of the tail is more olivaceous, less brownish, with the cross bars less sharply contrasted.

So far as I can learn, the adult male of this race has never been described. It may be distinguished from the male of *nigriceps* by the characters given above for the female with the exception that the whole top of the head, except a narrow, smoky gray frontal band, is Nopal Red x Brazil Red with the subterminal areas of the feathers Dark Neutral Gray, less blackish than in *nigriceps;* the lores also are paler than in the typical race.

My specimens were taken at an elevation of 10,300 feet and the Bolivian examples of *nigriceps* were collected at 2,500 and 2,600 meters. Both are temperate zone inhabitants like *equifasciatus* of Colombia and Ecuador, which differs from both *nigriceps* and *pectoralis* by having the pectoral bars and interspaces of equal width. I would place all three as races of the same species.

The Panao birds were taken in the same isolated patch of woods and may have been a mated pair although they were secured on different dates.

Veniliornis affinis haematostigma (Cabanis).

Picus haematostigma CABANIS in TSCHUDI, Faun. Per., Aves, p. 266, 1846—ex NATTERER MS.; no locality; evidently based on specimens in Natterer's collection; Vienna Mus.

C(ampias) hilaris CABANIS and HEINE, Mus. Hein., 4, pt. 2, p. 154, 1863—Perú; Halberstadt Mus.

V(eniliornis) ruficeps haematostygma HELLMAYR, Abh. K. Bay. Akad. Wiss., Kl. 2, 22, pt. 3, p. 611, 1906—crit.; type locality designated Engenho do Gama, Rio Guaporé, from named specimen in Natterer's collection; Vienna Mus.

A female from Huachipa, September 19, 1922; a male from Río Colorado, Chanchamayo Valley, February 6, 1923; a male and female from Puerto Bermúdez, March 14 and 18.

Compared with a female from Chanchamayo and a female from Porto Velho, Rio Madeira (nearly topotypical); also with a small series of *ruficeps* from Tury-assú, Rosario, and Barra do Corda, Maranhão, Brazil; a "Bogotá" skin is referable to *orenocensis*.

The Porto Velho specimen though nearly topotypical is not thoroughly characteristic of the race, judging by all accounts, since the streaks on the upper wing-coverts are rather pronounced, but it is a little paler below than females of *ruficeps* from Tury-assú and Rosario, has practically no red on the mantle, and has a more nearly unstreaked rump. The series from Perú bears out these characters but further shows a considerable reduction in the size of the shaft streaks on the upper wing-coverts. The under parts vary from the relatively dark color of the Porto Velho specimen to a noticeably paler hue and the upper wing-coverts are broadly tipped with red as in *ruficeps*. The males of *ruficeps* (from Tury-assú and Barra do Corda) are distinctly sootier on the ventral cross bars than any of the series of *haematostigma*.

Cabanis united with *passerinus* the specimens labeled *haematostigma* by Natterer, but he published the Nattererian name with a description, thereby validating it. Later (1863) he united this *haematostigma* with *ruficeps* and separated Peruvian specimens as *hilaris*. Without a large series of skins from the Rio Madeira and Perú it is difficult to say which arrangement is best—to unite *haematostigma* and *ruficeps*, unite *haematostigma* and *hilaris*, or recognize all three races. The closer resemblance of the Porto Velho bird to my Peruvian skins than to the series of *ruficeps* makes it appear most desirable at present to sink *hilaris* in the synonymy of *haematostigma* and refer the Peruvian specimens to the Rio Madeira form. Hellmayr (1906) fixed the type locality as Engenho do Gama because of a male specimen in the Vienna Museum from that locality labeled by Natterer, himself, *haematostigma;* Natterer's Borba and Marabitanas specimens were found to be referable to *ruficeps*.

The use of the specific name *affinis* is necessitated by Hellmayr's examination of the type of that species (cf. Hellmayr, Field Mus. Nat. Hist. Publ., Zool. Ser., **12**, p. 412, footn., 1929).

Picumnus jelskii Taczanowski.

Picumnus jelskii TACZANOWSKI, P. Z. S. London, 1882, p. 41, pl. 2, fig. 3—Paltaypampa, Perú; Warsaw Mus.

Picumnus irenae DOMANIEWSKI, Ann. Zool. Mus. Pol. Hist. Nat., **4**, No. 4, p. 292, 1925—Garita del Sol, Perú; imm. specimen; Warsaw Mus.

Picus jelskii vitocensis DOMANIEWSKI, t. c., p. 293—Garita del Sol, Perú; adults; Warsaw Mus.

A male from Vista Alegre, October 11, 1922, and a male and young female from Chinchao, November 8 and 10.

Compared with two males and two females from San Miguel Bridge, Urubamba Valley, Perú (three in U. S. Nat. Mus.; one in Amer. Mus. Nat. Hist.).

The Expedition series agrees fairly well with Taczanowski's description, but not so well with his plate which fails to show the pale edges on the interscapulars and upper wing-coverts mentioned in the text and present on my birds. The back is paler in the specimens than in the figure, though the description is accurate.

Domaniewski has attempted to separate Kalinowski's adult specimens collected at Garita del Sol from the type of *jelskii* taken at Paltaypampa, both localities being in the temperate zone in the Aynamayo Valley with only two hundred feet difference in elevation. The characters which he gives for *vitocensis* are purely individual and can be found in the two adults from Chinchao, one of which agrees with *jelskii* (as described) and the other with *vitocensis*. Domaniewski further described the young bird as a distinct species, *P. irenae*, also from Garita del Sol, although the specimen which forms the type had been correctly determined as a young male of *jelskii* by Berlepsch and Stolzmann and so recorded by them in 1902. My immature female from Chinchao answers to the description of *irenae* quite well.

This species is subtropical in distribution.

Picumnus punctifrons punctifrons Taczanowski.

Picumnus punctifrons TACZANOWSKI, Orn. Pér., 3, p. 65, and Tables, p. 87, 1886—part, Monterico (cf. DOMANIEWSKI, Ann. Zool. Mus. Pol. Hist. Nat., 4, No. 4, p. 296, 1925); Warsaw Mus.

Two males, one adult female, and one young female from Huachipa, September 19–29, 1922.

Compared with seven skins of *P. lafresnayei* from Moyobamba, Perú, and additional specimens of the same species from Zamora and Oyacachi, Ecuador.

The Huachipa specimens agree fairly well with Taczanowski's original description. This states that the dorsal (interscapular) feathers have olive yellow borders forming an undulation more or less pronounced; the diagnosis in the "Tables" is more positive and says that the light borders are little marked. In the present series the yellowish edges are present but are not at all pronounced. Taczanowski drew up his description from both Monterico and Huambo specimens, noting that the Huambo examples were in fresher plumage than the others and commenting on certain differences in the birds from the two localities; he ascribes the distinguishing features of the two series to this difference in freshness. Possibly the original description applies more closely to the Huambo birds, though this is difficult to determine.

However, Domaniewski (l. c.) selected as the type of *punctifrons* one of Taczanowski's specimens from Monterico and described the Huambo birds as new under the name *taczanowskii*, having a freshly plumaged bird from La Merced to compare with the fresh Huambo specimens. He added nothing to Taczanowski's comment on the characteristics of the Huambo birds and thus supplied no information as to possibly less distinct barring of the upper surface in the typical form. Hargitt (Cat. Birds Brit. Mus., 18, p. 544, 1890) describes as *punctifrons* (=*taczanowskii*) a Huambo specimen in which the upper parts were "olive barred with dull yellowish olive." In my Huachipa series, the upper parts are not unqualifiedly barred and I suspect that the typical Chanchamayo Valley form is likewise not barred but rather lightly margined on the upper back. The rump, as described by Taczanowski, is noticeably barred, apparently in both forms.

In any case, *taczanowskii* is said to be much brighter than *punctifrons* above, below, and on the outer margins of the secondaries, with the ventral barring less regular. In these respects, *P. lafresnayei* differs also from *punctifrons* exactly as indicated and would seem to be separable from *taczanowskii* only by the red instead of yellow tips on the forehead and by browner, less blackish, crown and occiput. On this account it is probable that *punctifrons* may be related to *lafresnayei* through *taczanowskii*. The general pattern is the same—olive above with yellowish edges, forehead with fine orange red or yellow spots, crown and occiput with small round

white spots, and under parts banded from chin to under tail-coverts. Moyobamba appears to be the most southern locality for *lafresnayei* and it is not far from Huambo but is separated from it by a range of mountains which has proven to be a subspecific distributional barrier in another instance (cf. Zimmer, Proc. Biol. Soc. Wash., **42**, p. 93, 1929). Without specimens of *taczanowskii* for examination I am unable to do more than suggest the possibility of the relationship expressed above.

The Huachipa birds were found in the tropical forest associated with the vagabond flocks as well as in the weed patches at the edges of the clearings.

Liosceles thoracicus thoracicus (Sclater).

Pteroptochos thoracicus SCLATER, P. Z. S. London, 1864, p. 609, pl. 38—Rio Madeira, Brazil; British Mus.

A male from Puerto Bermúdez, March 18, 1923.

No material for comparison.

The specimen agrees well with Sclater's original description. Sclater's later description (Cat. B. Brit. Mus., **15**, p. 344, 1890) speaks of the pectoral spot as being "orange-red" whereas in my specimen it is no brighter than Amber Brown overlying Baryta Yellow. It is possible that there is a racial distinction which is impossible to determine with a single specimen.

Scytalopus unicolor Salvin.

Scytalopus unicolor SALVIN, Novit. Zool., **2**, p. 15, 1895—Cajabamba, Huamachuco, Perú.

A male from the mountains near Panao, July 16, 1922.

Compared with a young male and five females of *S. acutirostris* from near Huánuco, a male from Chipa, Junín, and a female from Machu Picchu; a male and three females of *unicolor* from Palambla, Perú; and a male and female of *S. griseicollis* from El Pinon, a female from Tocainito, and two females from Chipaque, Colombia (all but the Huánuco specimens in Amer. Mus. Nat. Hist.).

The Panao bird seems to belong to the northern *unicolor* by reason of its longer legs, longer and slenderer bill (less elevated at base), longer wing, less barred flanks, tertials, tail, and rump, and gray instead of brown outer margins of the rectrices as compared with the series of *acutirostris*. However, there is a trace of barring on the tail, especially on the outer feathers, the outer margins of the

rectrices are dull brown, and there is a suggestion of barring on the tertials, all of which shows an approach toward *acutirostris*.

One female from the mountains near Huánuco is somewhat intermediate and is very difficult to place satisfactorily. It has large feet, slender bill (so far as can be determined, since this member is damaged), dark and relatively unbarred rump, upper tail-coverts, and flanks as in *unicolor*, and the tertials and tail are barred only at the tip though the outer surface of the remiges is definitely brown and not gray; the dorsal coloration is very little browner than in a female of *unicolor* from Palambla. On the other hand, a male of *acutirostris* from Chipa has the outer edges of the remiges gray with only a faint trace of brown, though the heavily barred flanks, tertials, and rump and the small bill and feet are typical of *acutirostris;* the female from Machu Picchu also has the remiges edged with gray, which throws some doubt on the value of this character.

So little is known of the seasonal, sexual, and ontogenetic differences in the plumages of these birds that a proper solution of their affinities is impossible at this time. It appears certain that the male from near Panao is not typical *unicolor* and the anomalous female from above Huánuco is not typical *acutirostris*, each varying in the direction of the other, so that it is very possible that *unicolor* and *acutirostris* may one day be shown to be specifically related. Huánuco and Panao are only a few miles apart across the ridge inhabited by these birds. The specimens were all taken in the same type of habitat which is not likely (probably unable) to support two distinct but related subspecies, one in each place. I anticipate the finding of intergrades when more material is collected in the region.

Scytalopus acutirostris (Tschudi).

Pt(eroptochos) acutirostris TSCHUDI, Arch. Naturg., **10**, (1), p. 282, 1844—Perú; Mus. Neuchâtel.

Three adult females, two immature females, and one immature male from the mountains near Huánuco, 12,200 feet, June 9–23, 1922.

Compared with the material noted under *S. unicolor*.

All but one adult female agree in general characteristics with the male from Chipa (which is probably nearly topotypical) and with Tschudi's description. One female shows a distinct approach toward *unicolor* with which it is discussed above.

The females in the series show a great deal of variation which may be worth recording. One bird has the mantle and tertials with black

concentric bars, the tail without black bands, the throat and breast pale gray with a buffy wash, the belly buff with dusky centers, the flanks with broad blackish concentric loops, the top of the head grayish brown with indistinct dusky points, the under wing-coverts buff, the outer edges of the remiges and upper wing-coverts pale brown, the primaries and greater wing-coverts with buff tips and black subterminal bars, and the alulet barred; it is evidently immature.

Another is similar but the top of the head is grayer, the mantle is less heavily barred, the belly is less extensively buff, the bars of the flanks are straighter, the under wing-coverts and lesser upper wing-coverts are grayer, the greater coverts are about as in the first specimen, the primary-coverts are grayish brown with blackish tips, and the outer margins of the remiges are darker brown; this bird also is immature.

A third female is grayer above than the second but marked about the same except that the bars on the tail are inclined to form concentric loops; below, the gray of the chest is clearer, the belly is only touched with buff, the flanks are brighter cinnamomeous, the lesser upper wing-coverts are still grayer, the primary-coverts are mostly blackish with brown outer margins, the alulet is gray, and the outer margins of the remiges are still darker gray; this specimen is rather adult than immature.

The fourth example is, above, about like the third but the central rectrices have definite concentric loops of black like the tertials; the under parts are entirely gray except the lower flanks and crissum which are deeper cinnamon; the top of the head is slightly brownish with fine dusky spots; the bird appears to be nearly adult.

The fifth example is clearer brown above without spots, the rump is unbarred and the upper tail-coverts are nearly so, the throat and breast are clear gray but the belly is deep buff centrally and the flanks are buffy brown with indistinct concentric loops of dusky; the tertials and tail are lightly barred only at the tips, the upper wing-coverts are totally unbarred except that the greater series have a faint buffy spot at their tips.

This entire series may be more or less immature since the adult male and female from Chipa and Machu Picchu have the back gray, unspotted, and the outer edge of the wing gray with only a touch of brown. It is also possible that the Panao male, which I have referred to *unicolor*, may be an extreme example of that form or may be a really adult specimen of the birds here referred to *acutirostris*. A

much larger series from various localities will be necessary to settle the question.

The present birds were found in the region of cloud forests in the temperate zone. Some were in thickets of stunted trees growing over tumbled piles of boulders where there were many little caverns among the rocks, overgrown with vines and covered with dripping moss. Others were along the banks of small streams which meandered across the near-by plain. In actions they were like the Winter Wren (*Nannus hiemalis*), being quick and secretive. Often it was necessary to burrow into precarious masses of roots and rotten logs to recover the specimens which had fallen into crevices, and not all of the birds that were shot were retrieved. The only note heard was a rather slowly repeated, "tyoók, tyoók, tyoók . . . ."

Scytalopus femoralis femoralis (Tschudi).

Pt(eroptochos) femoralis TSCHUDI, Arch. Naturg., **10**, (1), p. 281, 1844—Perú =Vitoc Valley, HELLMAYR, 1924; Mus. Neuchâtel.

An adult male from Huachipa, September 20, 1922.

Compared with a male from Andalucia, Colombia.

This specimen has a few silvery white feathers in the fore part of the crown, one such feather below the right auriculars, and one in the left malar region. The rufous on the posterior under parts is a little darker and duller than in the male from Andalucia, Colombia, and the size is a trifle smaller, but otherwise there is not much difference between the two birds.

The specimen was taken in the heavy tropical forest as the bird was running along a fallen log.

Conopophaga peruviana Des Murs.

Conopophaga peruviana DES MURS in CASTELNAU, Expéd. Amér. Sud, Ois., livr. 18, p. 50, pl. 16, fig. 1, June, 1856—Pebas and Nauta, n. e. Perú; Paris Mus.

A female from Puerto Bermúdez, March 13, 1923.

No material for comparison.

Conopophaga castaneiceps brunneinucha Berlepsch and Stolzmann.

Conopophaga castaneiceps brunneinucha BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 385—Garita del Sol, Perú; Warsaw Mus.

Three males and one female from Huachipa, September 19–23, 1922.

No material for comparison.

Two of the males are duller than the third which is in full, rich plumage.

These birds kept to the seclusion of overgrown thickets in dense forest where their dark plumage blended with the shadows on the ground, only the silvery white occipital tufts coming startlingly into view when displayed. The only note I heard from the species was a sharp "sheep."

Cymbilaimus lineatus intermedius (Hartert and Goodson).

Cymbilanius lineatus intermedius HARTERT and GOODSON, Novit. Zool., 24, No. 3, p. 495, Dec. 1917—Humaytha, Rio Madeira, Brazil; ♀; Tring Mus.

Two females from Huachipa, September 28, 1922.

Compared with a female from Rioja, Perú.

The Huachipa birds are slightly paler above than the Rioja example but, otherwise, agree closely.

Taraba major melanura (Sclater).

Thamnophilus melanurus SCLATER, Edinb. N. Philos. Journ., n. ser., 1, p. 233, April, 1855—part, Río Ucayali, e. Perú; imm. ♂; British Mus.

One male and two females from Vista Alegre, August 16–October 20, 1922; a male from Puerto Bermúdez, March 6, 1923.

Compared with three males and one female of *major* from Argentina and five males and two females from Matto Grosso, Brazil; nineteen males and thirteen females of *stagura* from Maranhão, Goyaz, Piauhy, Ceara, and Bahia, Brazil; six males of *semifasciata* from British and Dutch Guiana and Serra da Lua, Brazil.

The Vista Alegre male is marked by having broad white tips on the outermost rectrices and a white spot at the tips of the next pair. The amount of black on the under tail-coverts is indeterminable since most of these feathers are missing; one such feather which remains is pure black; two new feathers still in the sheath are white. The crest of *melanura*, judging by the present series, is shorter than in *transandeana*.

The bird was rather shy, keeping largely to the depths of the thickets in otherwise open country. Its iris was bright red in life.

Thamnophilus doliatus subradiatus Berlepsch.

Thamnophilus subradiatus BERLEPSCH, Journ. Orn., 35, p. 17, 1887—"Oberamazonas" =Iquitos, Perú; Frankfort Mus.

Thamnophilus variegaticeps Berlepsch and Stolzmann, P. Z. S. London, 1896, p. 379—La Merced, Chanchamayo, Perú; Frankfort Mus.

A male and female from the Río Colorado, Chanchamayo Valley, February 13 and January 30, 1923.

Compared with another male from the Chanchamayo Valley and an adult and a young male and two adult females from Moyobamba.

The Chanchamayo birds are darker throughout but are probably not separable from the northern specimens. Berlepsch and Stolzmann described *variegaticeps* from Chanchamayo by virtue of a supposed shorter crest with occasional white margins, broader dorsal white bands giving a paler coloration above, and more complete white bars on the tail, characters in which my specimens do not agree; Berlepsch later (Ornis, 1900, p. 93) referred Santa Ana specimens to the northern *subradiatus*. The race, like others of the group, is variable and can hardly be subdivided.

The Moyobamba specimens show what may be an approach toward *T. d. zarumae*, judging by descriptions, or toward *T. d. albicans*. The adult male has a white belly barred obsoletely on the upper part, the flanks are tinged with buff, the throat is lightly streaked, and the rest of the under parts are less heavily barred than in the Chanchamayo examples. *T. d. zarumae* has been recorded by Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 382, 1926) from Palambla, Perú, west, but very little north, of Moyobamba.

Thamnophilus palliatus puncticeps Sclater.

Thamnophilus puncticeps Sclater, Cat. Birds Brit. Mus., **15**, p. 212, 1890—part; Tilotilo and Consati, Yungas of La Paz, Bolivia; British Mus.

Four adult males, one immature male, three adult females and one immature female from Huachipa, Vista Alegre and Chinchao, August 16—to November 1, 1922.

Compared with two males and a female of *palliatus* from Maranhão, Brazil.

I use the name *puncticeps* with some diffidence after a careful examination of the merits of the case. Sclater's original description emphasizes characters which are not definitive, giving precedence to the white striations of the black cap and to narrower black and broader white ventral bands, which are found equally in east-Brazilian specimens of true *palliatus*. His "flanks somewhat rufescent" is better and in series seems to hold true on the average although the minimum of rufescence in Peruvian specimens can be matched by the maximum in Brazilian examples. Berlepsch and

Stolzmann (P. Z. S. London, 1896, p. 380) describe a male from Garita del Sol, Perú, as having the rufous of the back much paler than in Bahia males. This same feature is evident in my series when comparisons are made with comparable individuals in the Maranhão series. The young female from Maranhão, thus, is paler than the adults of both sexes from Perú and slightly darker than a young male from Chinchao, though much darker than a young female from the latter locality. Hellmayr (MS.) notes the pale coloration of Sclater's type of *puncticeps* as compared with a male from Mojos, e. Bolivia, and a number of Bahia skins, while a male from Chanchamayo, Perú, is said to be again darker though at the maximum of size. My Peruvian specimens average larger than recorded Bahia examples, Maranhão birds, and even eastern and western Bolivian specimens. It seems evident, then, that Peruvian examples average larger and have an average of paler, less chestnut, upper parts than typical *palliatus*. Bolivian specimens are intermediate; those from eastern Bolivia agree in both characters with *palliatus* and those from the west agree in size with *palliatus*, in color with *puncticeps*. The birds found in the region of the type locality of *puncticeps* are, therefore, less distinct from *palliatus* than are Peruvian examples and may be considered as unworthy of separation, but if the race is extended to include the Peruvian examples with their better marked characters, the name *puncticeps* may stand for the western Bolivian and Peruvian examples together.

A further character noticeable in my Peruvian birds, which may or may not occur in Bolivian examples, is a somewhat longer crest and a farther posterior extension of the black of the hind neck which reaches over the anterior back feathers.

To the northward, *T. tenuepunctatus* is found, with the race *berlepschi* in the departments of Amazonas and Loreto, Perú. Males of this species are barred black and white on the back, not rufous as in the *palliatus* group. A tendency toward this barring is shown by the males of both races of *palliatus* which have a few feathers on the sides of the hind neck barred with black and rusty white, but a male from Huachipa has the barring quite pronounced across the anterior interscapulars. Perhaps a good series from northern Perú would show a closer relationship between *tenuepunctatus* and *palliatus* than is demonstrable at present. A female from Poco Tambo, near Uchco, referable from geographic reasons to *tenuepunctatus berlepschi*, is separable from central Peruvian females only by having the pale rufous inner margins of the wing quills paler, more buffy,

and more sharply defined against the dusky median portions of the feathers.

The species was known locally as "Uitishu," in fancied imitation of the birds' peculiar song, which consists of several hurried notes in a descending scale with a suddenly lowered, explosive note at the end. The birds inhabit thick, scrubby growths near the ground where they clamber about in concealment, being oftener heard than seen. When they approach the outer margins of their retreat, their pale, whitish eyes are their most conspicuous feature.

Thamnophilus aethiops kapouni Seilern.

Thamnophilus aethiops kapouni SEILERN, Verh. Orn. Ges. Bayern, **11**, Heft 4, p. 277, 1913—Yahuarmayo, Carabaya, s. e. Perú; Mus. Seilern, Leskna, Czecho-Slovakia.

One male and three females from Huachipa, September 11–30, 1922.

Compared with four males and two females of *incertus* from Pará and Maranhão, Brazil.

The females show great variation in the depth of color on the back and under parts, but the crown is about the same hue of deep Chestnut Brown or Carob Brown in all. The male has a trace of pale apical spotting on several of the median upper wing-coverts, showing an approach toward *T. a. polionotus*.

Thamnophilus schistaceus hellmayri (Cory).

Dysithamnus schistaceus hellmayri CORY, Field Mus. Nat. Hist. Publ., Orn. Ser., **1**, p. 338, 1916—Rioja, n. Perú; Field Mus. Nat. Hist.

?Dysithamnus dubius BERLEPSCH and STOLZMANN, Ibis, 1894, p. 393—La Merced, Perú; Warsaw Mus.

Two males from Puerto Bermúdez, March 11 and 13, 1923.

Compared with the type of *hellmayri* and a female from Moyobamba; also with four skins of *schistaceus* from Río Espirito Santo, Bolivia, and two of *capitalis* from Iquitos.

One of the Puerto Bermúdez birds is about like the type above but is slightly paler below; the other is nearly the same as the type below but is blacker above.

Together with the type, these two birds are exactly intermediate between *schistaceus* and *capitalis* (as represented from Iquitos), being larger and darker than *schistaceus* and smaller and paler than *capitalis*.

A question exists with regard to the name *dubius*. Berlepsch and Stolzmann described a male from La Merced, Chanchamayo Valley, under that name. Hellmayr (Novit. Zool., 14, p. 63, 1914) referred a male from Chuchurras, Huánuco, to *dubius* while recognizing an unnamed separable form from Yurimaguas and Chyavetas, which later was named *hellmayri* by Cory. The Puerto Bermúdez examples, coming from between La Merced and Chuchurras, ought to belong to *dubius*, but seem to be inseparable from the type of *hellmayri* and do not show the characters ascribed to *dubius*. If both *dubius* and *hellmayri* are recognizable, their distributions are curious unless the Chuchurras bird can be referred to *hellmayri;* if they are identical, the older name, *dubius*, must be used. A series of Chanchamayo birds will be necessary to determine the correct status of the two forms.

On March 14 I collected a nest and two eggs which I am sure belonged to this species. I did not obtain the female which was sitting, not wishing to risk the destruction of the eggs by shooting at the nest, and I was unable to collect the parent bird when she hurriedly departed. However, I had watched the bird for some time from a distance of but a few feet and was able to see the heavy, hooked beak and rufous cap quite distinctly. The eggs were two in number, cream-colored with dark spots over all. The nest was a rather loosely built and shallow cup hung like a vireo's nest in the fork of a bush not above three feet from the ground. It was constructed of coarse plant fibers without any finer lining and was covered on the outside with green moss and some fungus-whitened twigs. As it was placed, a cluster of leaves hung over the top within an inch of the back of the brooding female. No male was seen in the immediate vicinity and the female, after leaving the nest, did not remain anywhere in sight but disappeared into the jungle. The eggs were destroyed in camp by a stray dog so that only the nest remains in the collection.

Thamnophilus melanchrous Sclater and Salvin.

Thamnophilus melanchrous SCLATER and SALVIN, P. Z. S. London, 1876, pp. 16, 18, pl. 3—Huiro, Urubamba Valley, Perú; British Mus.

Four adult males and one adult female from Chinchao, October 28–November 20, 1922.

Compared with two young males from Molinopampa; also with a male of *T. aspersiventer* from Jatumpampa, Cochabamba, Bolivia.

The present species is very close to *T. aspersiventer* from northwestern Bolivia which, as indicated by Hellmayr (Field Mus. Nat.

Hist. Publ., Zool. Ser., **13**, pt. 3, p. 104, footn. a, 1924) is similarly related to *caerulescens* and its races through *connectens*. With the material at hand it is impossible to demonstrate intergradation, although the forms are strict geographic representatives of each other and perhaps should be grouped together under the specific name *caerulescens*.

The Chinchao males show only the faintest trace of white barring or grayish coloration on the belly and flanks, which are pronounced in the Molinopampa specimens and shown in the original plate of the species.

Pygiptila stellaris maculipennis (Sclater).

Thamnophilus maculipennis SCLATER, Edinb. N. Philos. Journ., n. ser., **1**, p. 247, 1855—"Peruvian Amazons"; British Mus.

A female from Puerto Bermúdez, March 19, 1923.

Compared with three males from San José and two females from Río Suno, Ecuador (Amer. Mus. Nat. Hist.), and a male from Contamana, Río Ucayali, Perú; also with fourteen skins of *purusiana* from the Rio Purús (four males and six females, including the type, from Hyutanahán, two females from Arimã, and two females from Nova Olindo—all in Carnegie Mus.); and fifteen skins of *stellaris* from eastern Brazil (one male from Santarem, eight males from Colonia de Mojuy, Santarem, two females from Villa Braga, two females from Miriituba, one female from Itaituba, and one female from Aveiros, Rio Tapajoz—all in Carnegie Mus.).

The Puerto Bermúdez bird, although somewhat intermediate between *purusiana* and *maculipennis*, is much closer to the latter. It differs from the two Río Suno females by having the back much less gray and more olive brown with some grayish admixture, while the nape and upper interscapulars have only a slight grayish tinge. In spite of this, it is grayer above than all but one of the ten females of *purusiana* and has the tertials grayer, the lesser upper wing-coverts grayish with brownish edges, instead of uniform Cinnamon Brown, the upper surface of the tail deep gray, and the under parts with a faint grayish wash; in all of these characters, *maculipennis* appears to be separable from *purusiana*.

To further intensify the probability that the east-Peruvian bird is *maculipennis* and not *purusiana*, a male from Contamana, Río Ucayali, is darker above and below than four males of *purusiana* and has a generous admixture of black on the hind neck and upper interscapulars, serving to connect the black of the nape with that

of the middle interscapulars, while on the lower back it reaches to the rump. In these characters, the Contamana specimen agrees with three males of *maculipennis* from Ecuador and disagrees with *purusiana*.

Apparently, therefore, wherever *maculipennis* and *stellaris* may meet on the north bank of the Amazon (probably between the Rio Negro and the Rio Branco), south of the Amazon their meeting is prevented by the intervention of *purusiana*, although that form is not intermediate in racial characters but distinct from both the others. A series of *stellaris* from Santarem and the Rio Tapajoz is, in a sense, intermediate between *purusiana* and *maculipennis*. The males are exactly intermediate in the shade of gray, though in the extent of black on the upper back they are more like *purusiana*. The females are grayer above than *purusiana*, but are less grayish than typical *maculipennis;* the lesser upper wing-coverts occasionally are slightly grayish at base but the greater series have rather noticeable, though ill-defined, paler tips, thus combining the features of the other two forms. All three races are recognizable, although *purusiana* appears to have a curiously restricted range. It may extend eastward to the left bank of the Rio Madeira and northward to the Javari, but at present it is known only from the Rio Purús.

Thamnistes anabatinus rufescens Cabanis.

Thamnistes rufescens CABANIS, Journ. Orn., 21, p. 65, 1873—Monterico, Perú; Berlin Mus.

Two males and two females from Huachipa, September 21–October 7, 1922.

No material for comparison.

One male and one female are noticeably darker and more rufescent (less ochraceous) than the others, probably more closely approaching *aequatorialis*.

Dysithamnus mentalis tambillanus Taczanowski.

Dysithamnus tambillanus TACZANOWSKI, Orn. Pér., 2, p. 30, 1884—Tambillo, n. Perú; Warsaw Mus.

Three adult males and one young male from Vista Alegre, August 19–October 16, 1922; four adult males, two young males, and three females from Huachipa, September 10–October 7; one male and one female from Chinchao, November 9 and 12.

Compared carefully with a series of *tambillanus* from San Ignacio, Huarandosa, Lomo Santo, and Chaupe, northern Perú (Amer. Mus.

Nat. Hist.), and a male from Moyobamba; also with a series of *D. m. olivaceus* from Tulumayo and La Merced, c. Perú (Amer. Mus. Nat. Hist.).

The present birds are somewhat intermediate between the two races but are noticeably closer to *tambillanus*, having the grayer backs and less yellowish bellies of the northern males; the throats are inclined to be paler but not as white as in *olivaceus*. The females of both races are too nearly alike in variability to be clearly distinguishable. The male from Moyobamba is like the present series.

Dysithamnus ardesiacus ardesiacus Sclater and Salvin.

Dysithamnus schistaceus SCLATER (nec D'ORBIGNY), P. Z. S. London, **26**, p. 66, 1858—Río Napo, e. Ecuador; British Mus.

Dysithamnus ardesiacus SCLATER and SALVIN, P. Z. S. London, 1867, p. 756—new name for *D. schistaceus* SCLATER.

Four males and four females from Puerto Bermúdez, March 1–18, 1923.

Compared with the type and a female paratype of *huallagae* from Lagunas, n. Perú.

The males vary somewhat in the amount of black on the throat, but even the one with the most black has a generous amount of gray at the tips of the feathers. There is no trace of white on the mantle in either sex.

Myrmotherula brachyura (Hermann).

Muscicapa brachyura HERMANN, Tab. Aff. An., p. 299, note, 1783—based on "Le petit Gobe-mouche tacheté, de Cayenne"; BUFFON, Hist. Nat. Ois., 4, p. 554; DAUBENTON, Pl. Enl. 831, fig. 2; ♀; Cayenne.

A single male was taken at Puerto Bermúdez on March 16, 1923.

Compared with a male from Bogotá and two females from Moyobamba, Perú.

The Puerto Bermúdez bird differs from the Bogotá male in several respects. It is a little deeper yellow above and below; the scapulars have broader whitish outer margins which, on the uppermost, involve almost the entire outer web; the whitish scratches on the crown are less extensive; the rectrices are finely tipped with yellowish white; the feathers of the semi-concealed patch on the back are yellow to the base, instead of grayish at the base, and the extent of this patch is greater. These characters may be only individual. The two females from Moyobamba are more like the Bogotá male except for pale tips to the rectrices.

Myrmotherula longicauda australis Chapman.

Myrmotherula multostriata australis CHAPMAN, Amer. Mus. Novit., 86, p. 4, Aug. 1923—Rio Inambari, s. e. Perú; Amer. Mus. Nat. Hist.

One adult and one young male and one female from Vista Alegre, August 29–October 15, 1922.

Compared with a small series from northern Perú, eastern Ecuador (males only), Chanchamayo Valley, and Junín, Perú, and Department of Puno, southeast Perú.

All the males are nearly alike and almost indistinguishable. The females from Chanchamayo Valley and eastern Junín belong to typical *longicauda* and are separable from the others by a blacker, less buffy, tone of the upper surface and paler under parts, less heavily but more sharply streaked on the breast. The rest of the females are in general agreement although those from Moyobamba have the third outer rectrix less broadly tipped with white than the others. The Vista Alegre female is brighter and clearer in coloration than those from north and south, having the margins to the feathers of head and back rather deep ochraceous and the breast deep ochraceous, with the stripes broader and more clearly defined. These characters are so slight that it seems unwise to use them as the basis for descriptions of new subspecies unless they should be substantiated by large series from all parts of the regions under discussion, and yet the present arrangement is equally unsatisfactory. With *longicauda* restricted to the Chanchamayo Valley and eastern Junín and *australis* occurring in the southeast and north (the western boundary of the range reaches to the temperate zone which is uninhabitable for the species), we have one form virtually surrounded by the other. If the Vista Alegre birds should be described as new, the Moyobamba specimens would still be referable to *australis* whose range would then be interrupted by the interposition of two forms instead of one. It would be necessary to describe the Moyobamba birds (probably including Ecuadorian examples) as still another race on very minute characters, mainly on geographic grounds.[1] Probably it is best for the present to recognize but one variable form. Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 390, 1926) records typical *longicauda* from eastern Ecuador without having seen females from that region, but this is unlikely to be correct.

In any case, considerably more material is necessary before any definite changes can be proposed. With the present arrangement I must refer my Vista Alegre examples to *australis*.

[1]Since I penned the above account, *M. l. pseudoaustralis* has been described from Moyobamba by Gyldenstolpe (Ark. Zool., 21 A, No. 26, p. 28, 1930).

Specimens examined:

M. l. longicauda—Perú: San Ramón 1 ♂; Tulumayo, Junín, 2 ♂ 2 ♀[1].

M. l. australis—Perú: Moyobamba 4 ♂ 3 ♀; Vista Alegre 2 ♂ 1 ♀; Río Tavara 2♂[1]; La Pampa 1♂ 1♀[1]; Ecuador: Zamora 1♂; Macas 1♂[1].

Myrmotherula leucophthalma sororia Berlepsch and Stolzmann.

Myrmotherula sororia BERLEPSCH and STOLZMANN, Ibis, (6), **6**, p. 396, 1894—La Gloria, Perú; Warsaw Mus.

A male from Vista Alegre and a female from Huachipa, August 27 and September 14, 1922.

The sexes are quite different as in the other races of the species, and as given in the original description of *sororia*, and I am unable to understand Chapman's statement (Bull. Amer. Mus. Nat. Hist., **55**, p. 391, 1926) that in *sororia* the female is much like the male.

Myrmotherula atrogularis Taczanowski.

Myrmotherula atrogularis TACZANOWSKI, P. Z. S. London, 1874, p. 137—Amable Maria, Perú; formerly Warsaw Mus., now lost.

Myrmotherula guayabambae SHARPE, Bull. Brit. Orn. Club, **11**, p. 2, 1900—Guayabamba (=Huayabamba), n. Perú; ♀; British Mus.

Two males from Vista Alegre and three females from Huachipa, August 28–October 13, 1922.

I have not seen topotypical material.

Taczanowski (Orn. Pér., **2**, pp. 41–42, 1884) gave a more detailed description than in the original account, and pointed out differences between a male from Amable Maria and one from Huambo which he considered probably less mature than the other; Sclater (Cat. Birds Brit. Mus., **15**, p. 235, 1890) re-described the Huambo male. My two males agree better with the description of the Huambo specimen than with that of the type of *atrogularis* in that the elongated feathers of the rump are quite noticeably tinged with grayish olive, which Taczanowski says is not the case in the type. Sharpe described *Myrmotherula guayabambae* from northern Perú, comparing it unfortunately to *fulviventris*. Hellmayr compared the type with a female of *atrogularis* from Huambo and reported the two birds to be identical (Novit. Zool., **13**, p. 349, 1906). It is quite possible, however, that a separate form of *atrogularis* occupies northern Perú, including the Huallaga Valley as far south as Vista

[1] Specimens in American Museum of Natural History, New York.

Alegre, which should be known as *M. a. guayabambae* Sharpe, but a comparison must be made between Huambo specimens and topotypes of *atrogularis* before this separation can be formally approved. Unfortunately, I have no material for comparison.

Myrmotherula erythrura Sclater.

Myrmotherula erythrura SCLATER, Cat. Birds Brit. Mus., **15**, p. 236, pl. 15, 1890—Río Napo, Ecuador; ♀; British Mus.

A male and four females from Puerto Bermúdez, March 11–17, 1923.

Compared with a series of three males and three females from Río Suno and San José, Ecuador (Amer. Mus. Nat. Hist.).

Certain differences are apparent which may indicate a possible subspecific distinction. The male is a little buffier above than the Ecuadorian males, has a duller belly, white lores, and white throat, with only the faintest indication of dusky edges on a few feathers of the lower throat, while in the Ecuadorian specimens there are distinct blackish edges at the base of the gular feathers, giving a streaked appearance to the area. Unfortunately, the most pronounced character, that of the black-edged throat feathers, appears not to be constant, since Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 391, 1926) notes it as present in only three out of nine male specimens in hand.

The females from Perú can be told by the deeper orange buffy color below and by having the forehead, lores, and sides of the face buffy and not grayish as in Ecuadorian examples. The color of the mantle and the size of the pale spots on the upper wing-coverts appear to be valueless, since they can be matched rather closely in the two series.

Myrmotherula axillaris axillaris (Vieillot).

Myrmothera axillaris VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., **12**, p. 113, 1817—"La Guyane" = Cayenne.

A male and female were taken at Puerto Bermúdez, March 15 and 19, 1923.

Compared with eight males and five females from Bolivia, northeastern Brazil (Tury-assú, Maranhão, and Conçeição), and French Guiana; also with five skins of *melaena* from Moyobamba, Yurimaguas, and Rioja, northern Perú, Orope, Venezuela, and Bogotá, Colombia.

Apparently the Puerto Bermúdez birds belong to true *axillaris* although a thorough revision of the forms of this group probably would result in placing them in some other race. The male agrees with the Bolivian, east-Brazilian and French Guianan males in general characters but is a little smaller and has smaller spots on the upper wing-coverts. The female is grayer olive and less brownish than five others from northeastern Brazil and Bolivia, but the series is too meager to point out any constant differences.

Myrmotherula longipennis garbei Ihering.

Myrmotherula garbei Ihering, Rev. Mus. Paul., **6**, p. 441, pl. 15, fig. 1, 1905—Rio Juruá, w. Brazil; Mus. Paulista.

Myrmotherula longipennis Ihering (nec Pelzeln), op. cit., p. 441, pl. 15, fig. 2—Rio Juruá.

Myrmotherula longipennis longipennis Hellmayr, Field Mus. Nat. Hist. Publ., Zool. Ser., **13**, pt. 3, pp. 155–156—part, e. Perú.

Myrmotherula longipennis zimmeri Chapman, Amer. Mus. Novit., **205**, pp. 9–10, Dec. 28, 1925—part, e. Perú.

One male was secured at Puerto Bermúdez on March 17, 1923.

Compared with five males of *garbei* from Caviana, São Paulo de Olivença, Arimã, and Hyutanahan, Brazil (Carnegie Mus.).

This Peruvian specimen seems to be inseparable from *garbei*, agreeing perfectly with one example from Arimã, Rio Purús, as well as with Ihering's fig. 2 of *longipennis* Ihering (nec Pelzeln).

Chapman, in describing *M. l. zimmeri* from Ecuador, recorded my Peruvian specimen as belonging to his new form on the basis of a comparison, made by Dr. Hellmayr, which seemed to show no differences between the Ecuadorian and Peruvian examples. Apparently, the males of *garbei* and *zimmeri* are indistinguishable. How different these two forms are, therefore, must be determined by an examination of representative females, and females from eastern Perú are needed to ascertain definitely the form to which the Peruvian birds belong. In the meanwhile, since it seems more probable that *garbei* extends its range westward to eastern Perú than that *zimmeri* ranges southward from Ecuador across the Marañón and up the Ucayali River as far as Puerto Bermúdez, I have referred the present specimen tentatively to *garbei*.

Herpsilochmus axillaris (Tschudi).

Thamnophilus axillaris Tschudi, Archiv. Naturg., **10**, (1), p. 278, 1844—Perú; Mus. Neuchâtel.

One female from Huachipa, October 4, 1922.

I have no material for comparison other than a pair of the more or less closely related form, *H. rufimarginatus frater* from northeastern Brazil, from which it is, of course, quite distinct.

Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 395, 1926) has united *H. axillaris aequatorialis* with *H. a. axillaris* after comparison of a male from southeastern Perú and one from eastern Ecuador. These he found to agree in the characters by which Taczanowski and Berlepsch separated *aequatorialis* from *axillaris*, so the species is probably variable. Apparently it is quite rare, both in the field and in collections.

My bird was taken in the heavy tropical forest where it inhabited the undergrowth.

Cercomacra nigrescens approximans Pelzeln.

Cercomacra approximans PELZELN, Orn. Bras., **2**, pp. 85, 158, Sept. 1868—Engenho do Gama and Matto Grosso, Brazil; Vienna Mus.

Two males and three females taken August 17–24, 1922, at Vista Alegre; and one female, November 17, at Chinchao.

For comparison I have only a male and female from La Merced, Chanchamayo Valley, and a female from Poco Tambo, near Rioja.

The Poco Tambo specimen is considerably more rufescent than the more southern females which, however, are somewhat variable. One female from Vista Alegre shows traces of white on the lesser upper wing-coverts; another from the same place has two more or less distinct buffy wing bars. One Vista Alegre male has the concealed white dorsal patch very much reduced; the other has it quite large. The females vary also in the extent of this patch. The two Vista Alegre males show both the blackest and the palest extremes of gray upper surface; the La Merced male is intermediate. The form seems to be quite variable in the central Peruvian region and is probably referable to *approximans*, although the northernmost (Poco Tambo) example might prove to be separable if sufficient material were available to determine its status.

Cercomacra serva (Sclater).

Pyriglena serva SCLATER, P. Z. S. London, **26**, p. 66, 1858—Quixos, e. Ecuador; British Mus.

A male and a female were taken at Puerto Bermúdez on March 13 and 18, 1923.

I have no material for comparison.

The birds were found among the miscellaneous species associated in the vagabond flocks of the tropical forest.

Pyriglena leuconota picea Cabanis.

Pyriglena picea CABANIS, Arch. Naturg., 13, (1), p. 212, 1847—Perú; HELLMAYR, 1924, suggests Chanchamayo; Mus. Neuchâtel.

A single male taken at Vista Alegre, August 28, 1922.

Compared with two females from Chilpes and Utcuyacu, Perú (Amer. Mus. Nat. Hist.), and two females of *pacifica* from Chimbo and Naranjo, Ecuador (Amer. Mus. Nat. Hist.).

Unfortunately no female was found; hence exact determination of the form is impossible, but from geographic grounds there is not much doubt that the Vista Alegre specimen belongs to *picea*.

The bird was found in a thicket of second growth along the roadside at the edge of the tropical and subtropical zones and was very active and elusive.

Myrmoborus myotherinus myotherinus (Spix).

Thamnophilus myotherinus SPIX, Av. Bras., 2, p. 30, pl. 42, fig. 1, 1825—no loc. = Fonteboa; BERLEPSCH and HARTERT, 1902; ♂; type lost.

Hypocnemis melanolaemus SCLATER, P. Z. S. London, 22, "1854," p. 254, pl. 72, fig. 2, 1855—Chamicuros, Perú; British Mus.

Hypocnemis melanosticta SCLATER, t. c., p. 254, pl. 73; Chamicuros; ♂ juv. and ♀.

Four males and one female from Puerto Bermúdez, March 12 and 13, 1923.

Compared with a series of birds from São Paulo de Olivença, Rio Solimoës, Brazil, a series from Bolivia, and a male and female from Yurimaguas, Perú. (See subjoined list of specimens examined.)

In the combined series, certain differences are apparent which may or may not be worthy of recognition by name. Compared with the São Paulo birds, Bolivian males average a trifle paler above and darker below, noticeable only in series; Bolivian females are a trifle paler brown above and deeper ochraceous buff below, with the dark spots on the breast more pronounced.

The Puerto Bermúdez males, compared with the São Paulo birds, are slightly darker above and below; the single female is a little deeper ochraceous below and possibly darker above, while the spots on the breast are a little heavier than in one São Paulo example (they are obsolete in the other São Paulo female). Compared with the Bolivian series, the Puerto Bermúdez males average darker above

and below; the female is about the same above, a little paler than the average below, and the spots on the breast are smaller than the average.

Of the Yurimaguas pair, the male is paler above than the São Paulo birds but equal below; the female is paler above and about equal below, with the spots on the breast as in the Puerto Bermúdez female.

There is evidently considerable local variation, but I am unable to separate any distinct races from these examples without recognizing a different one from each locality. The name *melanolaemus* would be applicable to the north-Peruvian examples, but these are less separable than central Peruvian or Bolivian specimens. Consequently, I believe it is more advisable to consider them all as belonging to one form, albeit a variable one.

The use of the name *myotherinus* seems justifiable on the basis of Berlepsch and Hartert's designation of type locality as Fonte Boa (Novit. Zool., **9**, p. 78, April, 1902). Hellmayr rejected this designation in the belief that Spix had never visited Fonte Boa, while specimens from Rio Ica fitted Spix's description better than examples from south of the Amazon, and he designated Rio Ica as type locality (Arch. Naturg., **85**, A, Heft 10, p. 112, footn. 1, 1920). However, Spix actually spent three days at Fonte Boa (Reise Bras., **3**, p. 1184, 1831) so that, in the absence of proof that his type of *Thamnophilus myotherinus* came from somewhere else, we are not justified in rejecting Berlepsch and Hartert's designation. The São Paulo de Olivença examples are thus topotypical of *myotherinus*.

Specimens examined:

M. m. myotherinus—Brazil: São Paulo de Olivença 7 ♂ 2 ♀[1]; Prov. del Sara 3 ♂ 1 ♀[1]; Rio Surutu 3 ♂ 4 ♀[1]; Rio Yapacani 1 ♂[1]; Todos Santos 1 ♂. Perú: Puerto Bermúdez 4 ♂ 1 ♀; Yurimaguas 1 ♂ 1 ♀.

M. m. elegans—Colombia: La Murelia 2 ♂ 1 ♀[2]; Florencia 1 ♂ 2 ♀[2]. Ecuador: Río Suno 4 ♂ 4 ♀; San Jose de Sumaco 2 ♂ 2 ♀[2].

Hypocnemis cantator peruvianus Taczanowski.

Hypocnemis cantator peruvianus TACZANOWSKI, Orn. Pér., **2**, p. 61, 1884—Yurimaguas, Perú; Warsaw Mus.

One male from Puerto Bermúdez, March 6, 1923.

[1]Specimens in Carnegie Museum.
[2]Specimens in American Museum of Natural History.

Compared with four males and one female from Moyobamba.

The combined series of males appears to be uniform except that the Puerto Bermúdez example is rather smaller than the more northern birds (wing 53 mm. as against 60; tail 36 mm. as against 41–42).

The specimen was found in the wet tropical forest.

Hypocnemis flavescens subflava Cabanis.

Hypocnemis subflava CABANIS, Journ. Orn., **21**, p. 65, 1873—Monterico, Perú; formerly Warsaw Mus., now lost.

A female from Río Colorado, Chanchamayo, February 25, 1923.

Compared with a male from Chanchamayo, Perú, and one from Todos Santos, Bolivia.

The Río Colorado and Chanchamayo birds are nearly topotypes of *subflava*, but I have no true *flavescens* for comparison. The Bolivian bird appears to be inseparable from the Chanchamayo male.

Schistocichla schistacea intensa (Zimmer).

Myrmeciza schistacea intensa ZIMMER, Proc. Biol. Soc. Wash., **40**, p. 208, 1927—Huachipa, Perú; ♀; Field Mus. Nat. Hist.

A female (the type) and two males from Huachipa, and a male from Vista Alegre, August 26–September 22, 1922.

Compared with seven males and two females of *schistacea* from São Paulo de Olivença and Tonantins, w. Brazil (Carnegie Mus.), and five males and four females of *subplumbea* from Río Suno, Ecuador, and La Murelia, Colombia (Amer. Mus. Nat. Hist.).

While admitting Todd's genus *Schistocichla*, I am of opinion that *subplumbea* and *intensa* are only races of *schistacea*. Compared with *leucostigma* the characters of bill, feet, and tail, as discussed by Todd (Proc. Biol. Soc. Wash., **40**, p. 165, 1927), are the same in *schistacea* as in *intensa* so that if *schistacea* is to be considered an aberrant form of the genus, *intensa* is similarly so. More material is needed from northeastern Perú south of the Amazon and west of the Javari.

This bird was noted as having a scolding note much like that of the North American House Wren.

Pithys albifrons peruvianus Taczanowski.

Pithys albifrons peruviana TACZANOWSKI, Orn. Pér., 2, p. 73, 1884—Monterico, Amable Maria, Chyavetas; formerly Warsaw Mus., now lost.

A male and female from Puerto Bermúdez, March 16, 1923.

Compared with four specimens of *albifrons* from British and French Guiana.

The Puerto Bermúdez birds were secured from the low bushes along the trail through the heavy forest.

Hylophylax naevia theresae (Des Murs).

Conopophaga Theresae DES MURS in CASTELNAU, Exp. Amér. Sud, Ois., livr. 18, p. 51, pl. 16, fig. 2, June, 1856—Rio Javari, n. e. Perú; ♀; Paris Mus.

Four males from Huachipa and a female from Vista Alegre, August 26–October 4, 1922.

Compared with a male from Moyobamba, Perú; a male and female of *naevia* from the Mazaruni River, British Guiana; three males and three females of *consobrina* from Manacapurú, Brazil (Carnegie Mus.); and three males and two females of *obscura* from Tonantins, Brazil (Carnegie Mus.).

I have not seen topotypical examples of *theresae*, but my series differs from *naevia* as recorded for *theresae*, in the greater amount of gray with less brownish suffusion on the head, the smaller black saddle, and the heavier black spots on the breast. However, the characters are all variable. Three males of *H. n. obscura* from Tonantins, north bank of Rio Solimoës, are much closer. From *obscura*, the series of *theresae* males seem to differ only by having the crown and nape with more gray and less brown, the lower breast more ochraceous with less pure white, the ochraceous of lower belly and flanks less pinkish, the ground color of the back (exclusive of the black saddle) averaging duller and less rufous, and the black spots on the breast averaging heavier. Except for the color of the top of the head, the lower breast, and the belly and flanks, the two series overlap, and even within the series of *theresae* there is considerable variation in these particulars in the direction of *obscura*. The female of *theresae* is not fully adult. It differs from two females of *obscura* by being less rufescent brown above, with a larger black saddle having heavier pale spots on it; below, it is more ochraceous (less pinkish) buff, paler than one of the *obscura* females, darker than the other; the streaks on the breast are a little heavier than in either of the *obscura* females, in one of which they are much heavier than in the other.

Hylophylax poecilonota lepidonota (Sclater and Salvin).

Hypocnemis lepidonota SCLATER and SALVIN, P. Z. S. London, 1880, p. 160, —Sarayacu, e. Ecuador; ♀; British Mus.

A male from Vista Alegre, August 31, 1922, and a female from Puerto Bermúdez, March 16, 1923.

Compared with two males and three females from Zamora, Ecuador, and La Murelia, Colombia, from which they are not separable.

The male is not far removed from *griseiventris* of southern upper Amazonia, having the feathers of the lower mantle white for their basal half. The female, however, is quite unlike that race, being strikingly like the same sex of *gutturalis* from São Paulo de Olivença. The interrelationships of all the various races of *poecilonota* curiously are not demonstrable by either sex alone but only through the resemblances of females of certain forms and the males of others.

Myrmothera campanisona minor (Taczanowski).

Grallaria minor TACZANOWSKI, P. Z. S. London, 1882, p. 33—Yurimaguas, Perú; formerly Warsaw Mus., now lost.

One male of this species was secured at Puerto Bermúdez on March 13, 1923.

Compared with thirteen specimens of both sexes (Amer. Mus. Nat. Hist.) from Río Negro, Santa Rosa, Lagarto, Pomará, mouth of the Río Urubamba, and Orosa, Perú.

The Puerto Bermúdez example falls within the range of variation exhibited by the series. This consists of a slight change in the proportion of olivaceous and rufescent tones on the back, distinctness of the margins of the pectoral feathers, and intensity of the coloration of the under wing-coverts, with some differences in size in which the Puerto Bermúdez bird represents the minimum.

Grallaria squamigera canicauda Chapman.

Grallaria squamigera canicauda CHAPMAN, Amer. Mus. Novit., **231**, p. 1, Oct. 16, 1926—Cocopunco, Larecaja, Bolivia; Amer. Mus. Nat. Hist.

A male from the mountains near Huánuco, 10,500 feet, June 1, 1922, and a pair from near Panao, 10,300 feet, July 3 and 14.

Compared with a series of 22 skins of *squamigera* from Colombia and Venezuela.

While the size and general coloration are much as in some Colombian specimens, the tail is more as described for *canicauda*, being gray like the back and not at all brownish. Probably these three examples are more or less intermediate between *squamigera* and *canicauda* but may best be referred to the latter race, although

the tails measure only 61–63 mm. in length, which is less than the measurements given for typical examples from Bolivia.

The bird inhabits the floor of the thickets in the low temperate zone, where it is never an obtrusive resident. Of those I found, one seemed to materialize out of the shadows as my eyes became accustomed to the gloom on entering a shadowed ravine, and was quietly disappearing behind an adjacent tree when I stopped it with a shot. Another was in a sheltered pathway as I rounded a bend and, rail-like, made instant use of its long legs to carry it into concealment among the grasses. The third was in a bit of hillside forest where the allied *G. rufula obscura* also was taken.

Grallaria rufula obscura Berlepsch and Stolzmann.

Grallaria rufula obscura BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 385—Maraynioc, Junín, Perú; Warsaw Mus.

An adult female from the mountains above Panao, July 3, 1922.

Compared with a male and a female from Maraynioc (topotypes of *obscura*) and a young female from Rumicruz, Junín; also with the type of *cajamarcae*, two males from Chugur, and a female from Taulis, near Pacasmayo (all in Amer. Mus. Nat. Hist.); also with the type and seven additional specimens of *occobambae* (Amer. Mus. Nat. Hist. and U. S. Nat. Mus.).

The Panao specimen is closest to *obscura* but shows considerable approach toward *cajamarcae*, as might be expected from the intermediate position of the locality. The forehead is uniform with the crown as in *obscura;* the color of the back is lighter and less rufescent than in *obscura* but more rufescent and less olivaceous than in *cajamarcae*. Beneath, the color is not definitive.

The Panao bird was taken in the temperate forest on the mountain slope.

Grallaria andicola (Cabanis).

Hypsibamon andicolus CABANIS, Journ. Orn., **21**, p. 318, pl. 4, fig. 3, 1873—Maraynioc, Dept. Junín, Perú; Berlin Mus.

One male and three females from La Quinua, May 11–16, 1922, and two females from the mountains near Huánuco, 10,500 and 12,200 feet, June 7 and 26.

For comparison I have a female from the mountains near Balsas.

The series is rather uniform below, although the male and two of the females from La Quinua have a decided rosy suffusion on the belly which is not present in the others.

Above, there is a certain degree of variation in the amount of pale streaking. The male has the forehead and a broken collar on the hind neck with black-bordered buff streaks as in the others, but the rest of the back is comparatively uniform, with only ill-defined shaft lines of pinkish buff on the crown and interscapulars and a faint suggestion of black and buff on some of the scapulars. This seems to indicate a close relationship to *G. andicola* (as described; I have not seen examples of that form). The three females from La Quinua appear to be immature. Their rectrices and tertials are somewhat acute and are tipped with rather sharply defined, pale, triangular spots not noticeable in the other specimens. Two are only moderately streaked on the back; the other is the most heavily marked of all the series.

These birds inhabited the dense growths of bushes, ferns, and stunted trees that occupied portions of the hillsides in the temperate zone. They were very retiring in habits and required quiet stalking even to be seen. When found, the bird was usually standing large-eyed, silent, and motionless on a moss-grown root or similar perch or among the rotting leaves.

Geositta tenuirostris (Lafresnaye).

Alauda tenuirostris LAFRESNAYE, Mag. Zool., **6**, cl. 2, p. 7 of text to pls. 58–59, 1836—no loc.; type from Sicasica, Bolivia; Paris Mus.

Upucerthia juninensis BRABOURNE and CHUBB, Bull. Brit. Orn. Club, **35**, pp. 20–21, 1915—Junín, Perú; British Mus.

Two males from the mountains near Huánuco, 11,000 feet, June 7, 1922, and two females from Huánuco Viejo, December 20 and 24.

Compared with a male from near Otuzco, a male from Junín, and a specimen of unknown sex from Lara, Tucumán, Argentina.

My four birds agree with each other and differ from the three others in being more cinnamomeous buff below, with heavier brown edges on the breast feathers, distinctly brown sides of the breast, and with the white of the throat restricted to a small central patch; also in being richer (less grayish) brown above and more deeply rufescent on the wing lining. The Otuzco bird is exactly like the Argentine specimen; the Junín example is very like it also but has the wing bars more ochraceous and less rufous, being in this respect more like the Huánuco birds. The Otuzco and Huánuco Viejo skins have the shortest wings, the Argentine bird has the longest, while the Junín and Huánuco specimens are intermediate. One male from Huánuco has the longest bill of all, this being 38 mm. as against 33 in the Argentine example which is the next in the series.

These differences can not be arranged geographically and without more material I must conclude that they represent individual variations.

The species inhabits the high plains of the temperate zone, being found in the open grasslands.

Geositta crassirostris Sclater.

Geositta crassirostris SCLATER, P. Z. S. London, 1866, p. 98—Lima, Perú; British Mus.

Geositta fortis BERLEPSCH and STOLZMANN, Ornis, **11**, Nos. 2, 3, p. 194, Nov., 1901—Pauza, Perú; Warsaw Mus.

One male and two females from Matucana, April 28–May 3, 1922.

No material for comparison.

These specimens differ from the description of *crassirostris* exactly as *fortis* is said to do in the original description of that species, but since they are practically topotypical of *crassirostris* (which was found on the hills around Lima), they should represent *crassirostris*. If allowance is made for the immaturity of Sclater's type, which is mentioned by Hellmayr (Field Mus. Nat. Hist. Publ., Zool. Ser., **13**, pt. 4, p. 14, footn. a, 1925), the Matucana specimens agree well enough with the description of the form in question to indicate the identity of both names.

These birds were taken on the steep arid hillsides.

Cinclodes fuscus longipennis (Swainson).

Furnarius longipennis SWAINSON, Anim. in Menag., p. 350, 1838—Perú (probably the northern part of the country); W. Hooker's coll., Cambridge (Eng.) Mus.?

Three males and one female from the mountains near Huánuco, 12,000–12,200 feet, June 2–25, 1922.

Compared with a series of 127 skins from Junín, Cerro de Pasco, Oroya, Puno, and Otuzco, Perú, and from various parts of Chile, Bolivia, and Argentina, representing several subspecies. The Huánuco birds differ from all the rest in their dark sooty coloration of the upper parts (less grayish than in *fuscus*, less rufescent than in *albiventris*). They show rather deep brown flanks and moderately heavily margined feathers on the upper breast, and the white band on the primaries usually becomes distinct buff on the secondaries (largely white in one example). From *rivularis* of the Junín plateau and more southeastern highlands of Perú, they are separable by their darker coloration above and below and by the more buffy band on the secondaries; from *albiventris* of northern Chile and Bolivia and

the northern highlands of Tucumán, Argentina, they are separable by the distinctly darker and less rufescent upper parts and flanks.

These characters are quite noticeable in fresh, full-plumaged specimens though less pronounced in worn examples. The single Otuzco bird I have is badly worn and faded and might be referred to *rivularis* if this fact were not taken into account. Dr. Hellmayr advises me that he has seen six examples from Cajamarca that were noticeably darker than Junín birds, thus confirming the apparent distinctness of northern specimens.

I use the name *longipennis* for this race with little hesitation. Swainson's description is very detailed in some respects and, so far as I can determine, is applicable to no other bird than *Cinclodes fuscus rivularis* or the present race. It is true that the under parts are described as white without mention of the dusky margins of the feathers or the brownish flanks, but if Swainson's specimen were greatly worn, as is the Otuzco bird at hand, these characters would have been overlooked in all probability. The locality was given as "Peru" and the type was from W. Hooker's collection which, as is apparent from a study of the various Peruvian species described by Swainson from the same source, indicates a locality somewhere in the northern part of the country. The species immediately following *longipennis* in Swainson's paper (*Furnarius fasciatus* = *Heleodytes fasciatus*) is a case in point, since it is not found south of the Huánuco district and is unknown from the region of Junín.

Consequently, I believe it is better to adopt Swainson's name for the northern birds than to apply a new name which might have to be relegated to synonymy if Swainson's type should be unearthed some time in the future. If my conclusions are incorrect it will be easy to supply a new name when it is needed.[1]

Cinclodes fuscus rivularis (Cabanis).

Cillurus rivularis CABANIS, Journ. Orn., 21, p. 319, 1873—Maraynioc, Junín, Perú; Berlin Mus.

Two males from Cerro de Pasco, May 8, 1922.

Compared with a series as mentioned under the preceding race.

The Cerro de Pasco birds agree well with others from Junín, Oroya, and Puno while they are separable from a series of typical *albiventris* from northern Chile and various examples of *longipennis* from more northern Perú.

[1]Since writing the above I have learned through Dr. Hellmayr that a number of the species credited by Swainson to W. Hooker's collection has lately been discovered in Cambridge, England.

Compared with *albiventris*, the birds from the Junín plateau are noticeably less rufescent on the upper parts, paler buffy on the flanks, and less heavily margined on the feathers of the chest.

Cinclodes atacamensis atacamensis (Philippi).

Upucerthia atacamensis PHILIPPI, Arch. Naturg., **23**, (1), p. 263, 1857—San Pedro de Atacama, Chile; Santiago Mus.

One female from the Huallaga River below Cerro de Pasco, May 8, 1922.

Compared with a female from Putre, Tacna (Perú), two males and a female from Antofogasta, Chile, a male and female from Silola, Potosi, Bolivia, and a male and a female from Maimara, Jujuy, Argentina.

The Cerro de Pasco bird is noticeably different from the north-Chilean examples which were taken in May and June and are therefore comparable. The upper parts of the Peruvian bird are darker and browner rufescent, with the top of the head more dusky; the lower throat is more heavily marked with darker dusky tips on the feathers; the rest of the under parts are browner without any whitish tone on the mid line although the flanks are darker than the brownish buff belly.

Taczanowski's detailed description of *C. bifasciatus* (Orn. Pér., **2**, p. 111, 1884), probably based on Jelski's three Junín specimens, agrees better with the Chilean series than with my example which is from the northern end of the Junín plateau. It is possible, therefore, that the differences now apparent would disappear in a series from central Perú. With only a single specimen available from this region it would be unwise to attempt the separation of a new form, although future investigations may establish the existence of a distinct race in the north.

Upucerthia validirostris jelskii (Cabanis).

Coprotretis jelskii CABANIS, Journ. Orn., **22**, p. 98, 1874—Junín, Perú; Berlin Mus.

A male from Cerro de Pasco, May 8, 1922.

Compared with four specimens from Chipa, Junín (Amer. Mus. Nat. Hist.).

My bird agrees with the others in general characteristics but is noticeably more sooty throughout, with the crown rather darker than the back.

When first seen, this bird was running rapidly along the hillside with head and tail outstretched in a line with the back, looking very much like a long-tailed mouse.

Upucerthia serrana Taczanowski.

Upucerthia serrana TACZANOWSKI, P. Z. S. London, 1874, p. 525—Junín, Perú; formerly Warsaw Mus., now lost.

Cinclodes neglectus CORY, Auk, **36**, p. 89, 1919—Otuzco, Perú; Field Mus. Nat. Hist.

One female from La Quinua, May 15, 1922, and one male and two females from the mountains near Huánuco, 12,200–12,500 feet, June 12–29.

Compared with the type of Cory's *neglectus* from near Otuzco.

My series is rather uniform in coloration, although the female from La Quinua has the sides of the forehead distinctly cinnamomeous, which is not the case in the Huánuco birds.

The type of *neglectus* is immature, with the rectrices more acute at the tips than in the adults and with the bill (which lacks most of the maxilla) short, a fact which may have misled Cory in his determination of the genus. Its color is slightly paler and more amber rufous above than any of my series from central Perú, but this also may be due to immaturity. Other characters are well matched.

Leptasthenura striata cajabambae Chapman.

Leptasthenura striata cajabambae CHAPMAN, Amer. Mus. Novit., **18**, p. 9, 1921—Cajabamba, Perú; Amer. Mus. Nat. Hist.

Two males from La Quinua, May 15 and 16, 1922; a female from the mountains near Huánuco, June 18; and a male from Cullcui, Marañón River, December 11.

Compared with five males and two females of *striata* from Tacna (Perú) and Tarapacá, Chile.

The Expedition series agrees with Chapman's description and differs from *striata* by the characters given in the original account. The La Quinua birds show a slight approach to *striata* by having the crown somewhat paler and more tawny than in the Huánuco and Cullcui examples, but even in this respect they are closer to *cajabambae* and are perfectly typical in other characteristics.

These birds were very active and agile and clambered about the bushes and trees in a manner suggesting titmice.

Synallaxis azarae infumata Zimmer.

Synallaxis azarae infumata ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., **12**, No. 8, p. 103, 1925—Chinchao, Perú; Field Mus. Nat. Hist.

A male (the type) and two females from Chinchao, October 30–November 13, 1922.

Compared with ten skins of *azarae*, thirty skins of *elegantior*, thirteen of *fruticicola*, five of *media*, and one atypical example of *infumata* from Molinopampa, as indicated in the original description.

Cranioleuca baroni baroni (Salvin).

Siptornis baroni SALVIN, Novit. Zool., **2**, p. 14, 1895—Huamachuco, Perú; British Mus.

One male from Cullcui, Marañón River, December 11, 1922.

Compared with two males and five females of *C. b. capitalis* from the mountains of the upper Huallaga Valley.

This specimen agrees with a detailed manuscript description of the type made by the late Count Berlepsch.

Cranioleuca baroni capitalis Zimmer.

Cranioleuca baroni capitalis ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., **12**, No. 4, p. 54, 1924—La Quinua, Perú; Field Mus. Nat. Hist.

One male (the type) and three females from La Quinua, May 13 and 14, 1922; a male from the mountains near Huánuco, 10,500 feet, May 31; and two females from near Panao, July 5 and 16.

Compared with the male of *baroni* from Cullcui.

The present species was found in the scrubby trees and thickets of the temperate zone, going about in small flocks of five to ten individuals. It was very active and acrobatic, clambering about the trees in every conceivable attitude and seeming more at home when upside down than otherwise. Its call note was harsh but not unpleasing. At Panao I heard one individual several times utter a curious "quick-quick-quick-he-e-e-e-e."

Asthenes pudibunda pudibunda (Sclater).

Synallaxis pudibunda SCLATER, P. Z. S. London, 1874, p. 445, pl. 58, fig. 1—Obraillo (near Cauta, Dept. Lima), Perú; formerly Warsaw Mus., now lost.

A female from Matucana, May 3, 1922.

Compared with four males of *A. p. neglecta* from Macate, Perú, including the type.

The Matucana bird agrees excellently with Sclater's description and figure though not with Cory's synoptic key (Proc. Biol. Soc. Wash., **32**, p. 149, 1919) since there is no dusky shading on the second outer rectrix and only a faint trace of it on the third, exactly as in the form described by Cory as *neglecta*.

In comparison with the series of *neglecta*, there is a pronounced difference in the color of the gular patch which here is bright Ochraceous-Tawny but which is Hazel x Chestnut or Sanford's Brown in the northern examples. The size also is noticeably different. The Matucana specimen has a wing measurement of 56 mm. (54 not flattened), tail 69, exposed culmen 12½, and tarsus 20. The Macate specimens have the wing 60–64 mm. (not flattened 58–62), tail 80–88, exposed culmen 14–15, and tarsus 21½–22. The type of *pudibunda* (with original measurements reduced to millimeters) is said to have the wing 53.34 mm., and tail 73.66, with which the Matucana bird is in closer agreement than the others.

Berlepsch and Stolzmann (Ornis, **13**, p. 70, Sept., 1906) record one adult and one immature male from Coracora, Ayacucho, which the authors state agree well with Sclater's description of his Obraillo specimen but which have the wing 61½–62½ mm., tail 74½–82½, bill 13¾, and tarsus 21½–22. The measurements are close to those of the Macate birds. Much more material is desirable to ascertain the distribution and variation of the supposed races, but it seems probable that Cory's form is worthy of recognition.

Asthenes humilis (Cabanis).

Synallaxis humilis CABANIS, Journ. Orn., **21**, p. 319, 1873—Maraynioc, Perú; Berlin Mus.

Three males and five females from the mountains near Huánuco, 12,200 feet, June 19–28, 1922.

Compared with the type (Berlin Mus.), four males from Junín, Santiago, and Cajamarca (Amer. Mus. Nat. Hist.), and another male from Junín (Field Mus. Nat. Hist.).

There is some variation in the prominence of the dorsal streaking or spotting, the extent of rufous or cinnamon color on the outer rectrices, the size and hue of the chestnut patch on the throat, the color of the under wing-coverts, and the depth of buffy tone on the under parts, but these differences seem to be purely individual.

This spine-tail was almost entirely terrestrial in habits and was often found running actively through the grass and climbing over

the tumbled rocks in dry ravines. A favorite perch was the top of a rock where it would sit and jerk its tail sideways while it "barked" in short, staccato notes in a ludicrous suggestion of the actions of a prairie dog (*Cynomys ludovicianus*). It was usually wary and not easily approached.

Asthenes flammulata taczanowskii (Berlepsch and Stolzmann).

Siptornis taczanowskii BERLEPSCH and STOLZMANN, Ibis, (6), **6**, p. 393, 1894—Maraynioc, Perú; Warsaw Mus.

Four males and two females from the mountains near Huánuco, 12,000–12,500 feet, June 7–28, 1922.

Compared with a male from near Balsas, northern Perú.

I have seen no topotypical material but the specimens at hand agree well with the original description and with Taczanowski's later, more detailed account (Orn. Pér., **2**, p. 139, 1884). The male from near Balsas is a little brighter brown on the back and redder on the top of the head, with less streaking on the forehead and possibly more brown at the tips of the auriculars; otherwise it can be matched in the series from Huánuco.

This bird was fairly common among the bushes and trees in the mountains, clambering about the trunks and branches quite actively. So far as I observed, it was silent. I never saw it other than arboreal but nevertheless caught one in a mouse trap on the ground on June 21.

Asthenes urubambensis huallagae (Zimmer).

Siptornis urubambensis huallagae ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., **12**, No. 4, p. 53, 1924—mountains near Huánuco, 12,200 feet, Perú; Field Mus. Nat. Hist.

The type and a female from the same locality, June 28 and 22, 1922.

Compared with two males and two females from Machu Picchu (U. S. Nat. Mus.).

This species was found in company with *A. h. humilis* and *A. flammulata taczanowskii* on the upper slopes of the mountains. Its habitat was among the vines and creepers growing over the boulders and in the thickets of moss-covered trees in the cloud-forest, about which it clambered somewhat in the manner of a tree-creeper. While *taczanowskii* was almost strictly arboreal and *humilis* equally strictly terrestrial, the present bird was at home in the company of both the others.

Margarornis squamigera peruviana Cory.

Margarornis perlata peruviana CORY, Field Mus. Nat. Hist. Publ., Orn. Ser., 1, p. 291—Molinopampa, Perú; Field Mus. Nat. Hist.

Two adult males, one immature male, and three adult females from near Panao, July 3–12, 1922.

Compared with seven specimens from Molinopampa (including the type); also with a male and female from Torontoy, a female from Machu Picchu, and an immature specimen from Maraynioc (Amer. Mus. Nat. Hist); twenty-seven examples of *perlata* from Ecuador, Colombia, and Venezuela (eleven in U. S. Nat. Mus.); and a female of *squamigera* from Limbani, Carabaya, Perú.

Throughout these series, the differences between the various subspecies are quite recognizable, in some cases very pronounced.

The young male from Panao reproduces the pattern and colors of the adult in softened form. It has the yellow spots on the under parts broader, deeper yellow, and less sharply margined with dusky white; on the center of the belly the spots occupy the entire feather except for a narrow dusky border, thus losing their characteristic drop-like appearance.

Premnoplex brunnescens brunnescens (Sclater).

Margarornis brunnescens SCLATER, P. Z. S. London, 25, p. 27, pl. 116, 1856—Bogotá; British Mus.

Two adult males from Huachipa and Vista Alegre, September 12 and August 28, 1922.

Compared with three specimens of *brunnescens* from Colombia and one of *stictonotus* from Bolivia.

The two Peruvian examples belong to *brunnescens* by reason of lacking the conspicuous spotting of the back as found in *stictonotus* but here only faintly suggested; also by having the under tail-coverts less largely spotted.

The Vista Alegre bird has the pale centers of the belly feathers rather broader than any of the others, not excepting the Huachipa example, while both Peruvian skins are a little browner and less rufous above than the Colombian examples, with the top of the head duller and with a slightly greater amount of pale hair-streaks on the back. In these respects they show an approach toward the characters of *stictonotus* of Bolivia and southeastern Perú; the differences between that form and *brunnescens* in these particulars is not great.

The species was found in the tropical zone forest.

Pseudocolaptes boissonneauti medianus Hellmayr.

Pseudocolaptes boissonneauti medianns (err. typ.) HELLMAYR, Anz. Orn. Ges. Bayern, No. 1, p. 3, Febr., 1919—Leimabamba, n. Perú; Munich Mus.

One female from near Panao, July 13, 1922.

Compared with four skins of *boissonneauti* from Colombia (Bogotá, La Florida, and near Popayan) and with eight skins of *meridae* from Venezuela.

The Panao specimen has the neck tufts not pure white as indicated in the original description but slightly tinged with yellowish along the lower margin. The measurements are at the minimum for *medianus* (wing, 107 mm.; tail, 98½). It is thus somewhat intermediate between typical *medianus* and *auritus*, judging by descriptions.

The specimen was taken in the bamboo thickets along the river. When first seen the bird was facing me and had the neck tufts expanded laterally so that they stood out from the sides of the head, giving it an owlish appearance. A second individual was seen but not secured.

Ancistrops strigilatus (Spix).

Thamnophilus strigilatus SPIX, Av. Bras., 2, p. 26, pl. 36, fig. 1, 1825—no loc.; Rio Solimoës, Brazil, suggested by HELLMAYR, 1925; Munich Mus.

Anabates lineaticeps SCLATER, Ann. Mag. Nat. Hist., (2), 17, p. 468, 1856—e. Perú; (ex Verreaux coll.) British Mus.

A male from Puerto Bermúdez, March 17, 1923.

Compared with a male in the United States National Museum from "Pérou (ex Verreaux)," and with a large series in the Carnegie Museum from São Paulo de Olivença, Tonantins, and Hyutanahán, Brazil.

There are no striking differences apparent in the series although there is some irregular variation in the hue of the lesser upper wing-coverts. Spix's original description and plate both fail to record the rather conspicuous superciliary stripe, but in other respects they are identifiable with the birds under discussion.

Philydor subfulvus Sclater.

Philydor subfulvus SCLATER, P. Z. S. London, 1861, p. 377—Gualaquiza, Ecuador; British Mus.

A male from Huachipa, September 11, 1922.

No material for comparison.

This species is closely related to *P. atricapillus*, although the two species are separated by a wide extent of territory.

Philydor rufus bolivianus Berlepsch.

Philydor columbianus bolivianus BERLEPSCH, Ornis, **14**, p. 366, Febr., 1907—Santa Cruz de la Sierra, Bolivia; Berlepsch coll., Frankfort Mus.

One male from Huachipa, September 18, 1922, and three females (one immature) from Vista Alegre, August 21 and September 1.

Compared with two males from Vermejo, Santa Cruz, Bolivia (Amer. Mus. Nat. Hist.), and two males and two females of *rufus* from São Sebastião and Fazenda Cajoá, São Paulo, Brazil.

The Peruvian specimens, in comparison with the Bolivian, are perhaps a trifle darker on the back, a shade grayer on the crown, and with the forehead less extensively ochraceous, but the differences are not pronounced.

The immature female, which is nearly adult, is distinguishable from the full-grown birds by having the colors clearer, the bill shorter, less uncinate, and uniformly blackish except at the extreme tip, and the rectrices more sharply pointed, with downy plumules still attached to the tips of the feathers.

The present specimens are the first known from Perú.

Philydor erythropterus (Sclater).

Anabates erythropterus SCLATER, P. Z. S. London, **24**, p. 27, 1856—Bogotá; British Mus.

A single female from Puerto Bermúdez, March 12, 1923.

No material for comparison.

In some respects, such as the comparative lengths of wing and tail and the shape of the bill, this bird resembles *Automolus* more than it does *Philydor*. It appears to be a very rare species.

Automolus infuscatus infuscatus (Sclater).

Anabates infuscatus SCLATER, Ann. Mag. Nat. Hist., (2), **17**, p. 468, 1856—e. Perú, upper branches of Peruvian Amazon; British Mus.

Three males and two females from Puerto Bermúdez, March 15–18, 1923.

Compared with a female from Puerto Arturo, Yurimaguas.

The Yurimaguas bird differs from my series by having a little more rufous tone on the forehead, mantle, and under wing-coverts,

and paler sides of the breast. It seems to be not fully adult, however, which may account for the differences.

The species was found only among low bushes in the forest. It was exceedingly active, constantly darting from one bush to another and back again, or circling to a different thicket. Attempts to stalk it openly were not very successful.

Xenops minutus obsoletus Zimmer.

Xenops minutus obsoletus ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., 12, p. 57, 1924—Puerto Bermúdez, Perú; Field Mus. Nat. Hist.

A male (the type) from Puerto Bermúdez, March 15, 1923; a female from the Río Colorado, Chanchamayo Valley, January 30; and a male and a female from Huachipa, October 4 and September 28, 1922.

Compared with various skins of typical *minutus*, *genibarbis*, *ruficaudus*, and *littoralis* as tabulated in the original description.

Xenops rutilans purusianus Todd.

Xenops rutilus purusianus TODD, Proc. Biol. Soc. Wash., 38, p. 79, 1925—Hyutanahán, Rio Purús, Brazil; Carnegie Mus.

A male from Chinchao, November 8, 1922, and two males and a female from Huachipa, September 15–October 5.

Compared with a female and two males from the type locality and a male and female from Arimã (Carnegie Mus.); also with eight specimens of *rutilans* from eastern Brazil and Misiones, Argentina; a female of *connectens* from Jujuy, Argentina; a female of *guayae* from Puente de Chimbo, Ecuador; seven skins of *heterurus* from Bogotá and Santa Elena, Colombia; and the type and three other skins of *septentrionalis* from Costa Rica and Panamá.

The Chinchao bird agrees best with *purusianus* although it differs in having less black in the tail than the average of that form. Without more Peruvian material I can not tell if this difference and others may be significant.

Xenops rutilans Temminck, 1821, antedates *Xenops rutilus* Lichtenstein, 1823, as the specific name of this group.

Sclerurus albigularis zamorae Chapman.

Sclerurus albigularis zamorae CHAPMAN, Amer. Mus. Novit., 86, p. 17, 1923—Zamora, e. Ecuador; Amer. Mus. Nat. Hist.

Three males and two females from Huachipa, September 11–October 7, 1922.

Compared with three female topotypes (Amer. Mus. Nat. Hist.); also with five males, three females, and three examples of unknown sex of *propinquus* from Santa Marta, Colombia (Carnegie Mus.), and twelve skins of *albigularis* from eastern Colombia, Venezuela and Trinidad (Amer. Mus. Nat. Hist.).

The Huachipa birds are more strongly marked and more distinct from *albigularis* and *propinquus* than are the topotypes examined in this connection. Two of my specimens agree well with one from Zamora which is darker than the other two, but three of mine are still darker, especially one which has the pectoral band almost clear Auburn x Argus Brown. In all of the specimens the upper tail-coverts are but slightly brighter than the back, the character which seems to be of greatest use for the separation of this subspecies.

Sclerurus mexicanus peruvianus Chubb.

Sclerurus mexicanus peruvianus CHUBB, Bull. Brit. Orn. Club, **39**, p. 41, 1919—Yurimaguas, e. Perú; British Mus.

A female from Puerto Bermúdez, March 6, 1923.

Compared with a female from Zamora, e. Ecuador (Amer. Mus. Nat. Hist.); also with the type of *pullus* and a topotype (female), and a male and female from Costa Rica (Mus. Comp. Zool.), six specimens of *obscurior* from Colombia and w. Ecuador (five in Amer. Mus. Nat. Hist.; one in Mus. Comp. Zool.), and five skins of *anomalus* from Panamá and La Frijolera, Colombia (Mus. Comp. Zool.).

The Puerto Bermúdez and Zamora birds appear to be inseparable from each other and referable to this dull colored race.

Lochmias nematura obscurata Cabanis.

Lochmias obscurata CABANIS, Journ. Orn., **21**, p. 65, 1873—Monterico, Perú; type formerly in Warsaw Mus., now lost.

A single male from Chinchao, November 12, 1922.

Compared with a male and female from Pico Naigata, Miranda, Venezuela (Carnegie Mus.), a specimen of undetermined sex from the Bogotá region, Colombia (Amer. Mus. Nat. Hist.), and a male from the Department of Santa Cruz, Bolivia (Carnegie Mus.); also with a number of skins of *nematura* from Uruguay, Paraguay, and Brazil (U. S. Nat. Mus. and Field Mus. Nat. Hist.).

The Venezuelan birds are topotypes of *sororia* and the Colombian specimen is referable to the same form. The Bolivian bird is more like the Peruvian skin. Thus aligned, *obscurata* appears to be larger

than *sororia* (wing 77–78 mm. in males as against 75 male, 72 female, and 70 sex unknown), its upper surface averages duller and less rufescent, the white on the throat averages broader, and that on the belly narrower and more restricted on each of the feathers. The two races are exceedingly close, however, and in larger series may prove to be inseparable.

Xiphorhynchus chunchotambo chunchotambo (Tschudi).

D(endrocolaptes) Chunchotambo TSCHUDI, Arch. Naturg., **10**, (1), p. 295, 1844—Perú (probably Chanchamayo region); Mus. Neuchâtel.

Four males and two females from Huachipa, September 11—October 2, 1922.

Compared with a male from Pozuzo and a female from Rioja, Perú; also with two specimens of unknown sex from "Bolivia" and a male from Río Espírito Santo, Bolivia.

The Pozuzo bird, which probably is nearly topotypical, is more rufescent in ground color than the other Peruvian birds which are more olivaceous. The Bolivian birds agree with the Pozuzo example in general coloration, but have the pale portions of the throat and breast feathers a little deeper buff than in any Peruvian skin. Also they are distinctly smaller in all measurements than the Peruvian series (wing, male, 97½ mm.; unsexed specimens, wing, 88½ and 92 as against males, 102–108 mm.; females 98–101; other measurements in proportion). Considerably more material is necessary from Bolivia and the Chanchamayo region before determining any constant differences.

This species is woodpecker-like in habits, clinging to the sides of the tree trunks and hammering on the bark in similar manner. It often accompanied the vagabond flocks of the tropical forest where it was found.

Xiphorhynchus elegans insignis (Hellmayr).

Dendrornis insignis HELLMAYR, Bull. Brit. Orn. Club, **15**, p. 55, 1905—Samiria, Río Marañón, Perú; Berlepsch coll., Frankfort Mus.

A male and female from Puerto Bermúdez, March 14 and 15, 1923.

No material for comparison.

The male has the pale spots on the mantle smaller than in the female and not sharply outlined with blackish, the pale spots of the lower breast and belly are obscure, and there are distinct, though

fine, pale hair lines on the terminal part of the shafts of the lesser and middle upper wing-coverts. These details show an approach toward *elegans* as described.

Lepidocolaptes fuscicapillus fuscicapillus (Pelzeln).

Picolaptes fuscicapillus PELZELN, Orn. Bras., 1, pp. 44, 63, 1868—Engenho do Gama, Brazil; types in Vienna Mus.

A male from the Río Colorado, Chanchamayo Valley, February 7, 1923.

Compared with a male and female of *L. f. layardi* from Tury-assú, Maranhão, Brazil, and a male of *L. f. madeirae* from Porto Velho.

The feathers of the forehead and crown have dusky tips, most noticeable on the sides, and a faint suggestion of pale subterminal spots, suggesting relationship with some of the forms with spotted heads. The ventral coloration is decidedly buffier than in the specimens of *layardi* and *madeirae;* the general coloration of the upper parts is nearer to that of *madeirae.*

Campylorhamphus trochilirostris napensis Chapman.

Campylorhamphus trochilirostris napensis CHAPMAN, Amer. Mus. Novit., 187, p. 4, Sept. 28, 1925—Río Suno, above Avila, e. Ecuador; Amer. Mus. Nat. Hist.

A male from Puerto Bermúdez, March 17, 1923, and a female from Vista Alegre, August 20, 1922.

Compared with the type (male), a topotype (female), and another female from the Río Suno (Amer. Mus. Nat. Hist.), and with a male and female of *thoracicus* from Puente de Chimbo, w. Ecuador.

The Peruvian birds unquestionably are closest to *napensis,* being more rufescent (less olivaceous), with narrower, less conspicuously margined, pale streaks above and below and with browner (less blackish) top of the head; also the bill is paler and slightly more curved than in *thoracicus.*

The Peruvian specimens have noticeably longer wings than the Río Suno birds (male 98 mm. and female 102 mm. as compared with male 96 and females 95 and 93, respectively), but without larger series to determine the limits of individual variation, the significance of this feature is uncertain. The Vista Alegre and Río Suno females are very similar in coloration, especially below; above, the Vista Alegre specimen is somewhat more narrowly streaked, being

more like the type in this respect. The Puerto Bermúdez example is more narrowly streaked below while the streaks on the mantle are more clearly margined with dusky as in the Río Suno examples. The type has the belly more distinctly streaked than the other specimens. Apparently these various features are more or less variable within certain limits which define the race as distinct from *thoracicus*. Sztolcman's *C. t. zarumillanus* from Lechugal, n. w. Perú, seems to be a synonym of *thoracicus* though it exhibits some differences corresponding to the variation shown to be present in *napensis*.

The two Peruvian specimens extend the known range of *napensis* considerably to the southward, since there are no other records of this race from any part of Perú.

In habits these birds were very creeper-like, ascending the boles of forest trees and exploring the crevices of the bark in search of food.

Glyphorhynchus spirurus castelnaudii Des Murs.

Glyphorhynchus castelnaudii DES MURS in CASTELNAU, Expéd. Amér. Sud, Zool., 1, livr. 18, Ois., p. 47, pl. 15, fig. 2, 1856—Santa Maria (near Pebas?), Perú; Paris Mus.

One male and three females from Puerto Bermúdez, March 10–14, 1923.

Compared with a female from Chanchamayo (Field Mus. Nat. Hist.) and a male and female from Tulumayo, Junín (Amer. Mus. Nat. Hist.); eight specimens of *albigularis* from Río Inambari and La Pampa, Río Tavara, Perú, and Río Espírito Santo and Tres Arroyos, Bolivia (Amer. Mus. Nat. Hist.); a male, two females, and an unsexed specimen of *spirurus* from Surinam, and from Manáos and Conceição, Brazil (Field Mus. Nat. Hist.); two males and a female of *cuneatus* from Utinga, Pará, and Tury-assú, Maranhão, Brazil (Field Mus. Nat. Hist.); and sixty-four birds from Guatemala, Costa Rica, Venezuela, Colombia, and Ecuador (Field Mus. Nat. Hist., Amer. Mus. Nat. Hist., and Acad. Nat. Sci. Philad.).

The arrangement of the Central American and western South American material is somewhat doubtful in view of varying opinions as to the limits of racial distribution and the proper allocation of certain records. However, the Peruvian specimens from as far south as the Chanchamayo district appear to belong to *castelnaudi*. Birds from eastern Ecuador (Avila, Río Suno, Sumaco, Río Curaray, and San José) appear, with few exceptions, to agree with these Peruvian examples. On the other hand, specimens from Cerro Manglar Alto, Río del Oro, La Chonta, Esmeraldas, Santo Domingo, and Mindo,

Ecuador; all of Colombia; Rio Guachi, Venezuela; and Costa Rica are rather more heavily margined on the feathers of the throat and have the belly more distinctly streaked than the central Peruvian series, and are closer to the Guatemalan birds in these respects though the latter are even more strongly marked. On the basis of the material examined I recognize *pectoralis* from Guatemala, include the birds from Colombia, western Venezuela, and western Ecuador in *sublestus* (Peters, 1929), and refer east-Ecuadorian examples to *castelnaudii*.

Sittasomus griseicapillus amazonus Lafresnaye.

Sittasomus Amazonus LAFRESNAYE, Rev. Mag. Zool., (2), 2, p. 590, 1850—"Haut Amazone"; Paris Mus.

A male and a female from Huachipa, September 11 and 21, 1922.

Compared with a single female from Serra Grande, Rio Branco, Brazil; also with four specimens of *griseicapillus* from northern Argentina, eight skins of *reiseri* from northeastern Brazil, and ten skins of *sylviellus* from southern Brazil.

The Peruvian birds agree with the Rio Branco example.

Deconychura longicauda connectens Zimmer.

Deconychura longicauda connectens ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., **17**, No. 1, p. 8, 1929—Puerto Bermúdez, Perú; Field Mus. Nat. Hist.

A male (the type) from Puerto Bermúdez, March 17, 1923.

Compared with a male from Sabanilla and an unsexed specimen from Cutucuo, Ecuador (Amer. Mus. Nat. Hist.); also with various skins of *longicauda*, *pallida*, *minor*, and *typica* as noted in the original description.

Deconychura stictolaema secunda Hellmayr.

Deconychura secunda HELLMAYR, Bull. Brit. Orn. Club, **14**, p. 51, 1904—Coca R., upper Río Napo, Ecuador; Tring Mus.

A female from Puerto Bermúdez, March 6, 1923.

Compared with a male from São Paulo de Olivença; also specimens of *stictolaema* and *clarior* from Brazil and French Guiana, as listed in my review of the genus (Field Mus. Nat. Hist. Publ., Zool. Ser., **17**, No. 1, p. 18, 1929).

Pipra coronata exquisita Hellmayr.

Pipra exquisita HELLMAYR, Bull. Brit. Orn. Club, **15**, p. 56, 1905—Chuchurras, Perú; Tring Mus.

Three males and one female from Puerto Bermúdez, March 9–18, 1923.

Compared with the type of *circumpicta* from Munichis, Yurimaguas, northern Perú.

These specimens are almost topotypical and, in addition, have been compared with a paratype of *exquisita* by its describer.

Pipra caeruleo-capilla Tschudi.

P(ipra) caeruleo-capilla TSCHUDI, Arch. Naturg., **10**, (1), p. 271, 1844—Perú; Mus. Neuchâtel.

One male and four females from Huachipa, September 12–October 2, 1922.

No other material of the species available for comparison.

One of the females has several distinctly bluish-tipped feathers among the scapulars and greater upper wing-coverts on the left side. All of the females are more decidedly yellowish green on the upper surface than a female of *P. coronata exquisita* and are duller and grayer below, besides having a smaller bill and shorter tail and wing.

Pipra chloromeros Tschudi.

P(ipra) chloromeros TSCHUDI, Arch. Naturg., **10**, (1), p. 271, 1844—Perú; Mus. Neuchâtel.

One young male from Vista Alegre, August 18, 1922.

Compared with a young male from Río Espírito Santo, Bolivia.

The Bolivian bird is a little duller than the Peruvian, and rather darker and browner, with the lores dark like the crown, whereas in the Vista Alegre specimen they are yellowish like the throat.

This and an adult male which escaped were the only examples of the species observed. They were found in the heavy tropical forest.

Pipra pipra microlopha Zimmer.

Pipra pipra microlopha ZIMMER, Proc. Biol. Soc. Wash., **42**, p. 85, 1929—Puerto Bermúdez, Perú; Field Mus. Nat. Hist.

One adult male (the type), four young males, and a female from Puerto Bermúdez, March 10–18, 1923.

Compared with three males from Orosa, Perú (Amer. Mus. Nat. Hist.), and a male from São Paulo de Olivença, Brazil (Carnegie Mus.); also with specimens of typical *pipra*, *anthracina*, *coracina*, *comata*, and intermediate examples as listed in the original description.

Details of plumages have been discussed in the original account.

Pipra pipra comata Berlepsch and Stolzmann.

Pipra comata BERLEPSCH and STOLZMANN, Ibis, 1894, p. 392—La Gloria, Perú; Warsaw Mus.

An adult and a young male from Vista Alegre, August 22 and 24, 1922; a male and a female from Huachipa, September 26 and 29; a male and a female from Chinchao, November 14 and 20.

Compared with various races of *pipra* as listed in the description of *P. p. microlopha* (Proc. Biol. Soc. Wash., **42**, p. 85, 1929).

Tyranneutes stolzmanni (Hellmayr).

Pipra stolzmanni HELLMAYR, Ibis, 1906, p. 44—Marabitanas, n. w. Brazil; Vienna Mus.

A female from Puerto Bermúdez, March 10, 1923.

Compared with a male of *T. virescens* from British Guiana.

In addition to the curious structure of the tail mentioned by the describer, this specimen has the outer primary six millimeters shorter than the second, which is subequal to the third and fourth. In the male of *virescens* the outer primary is only two millimeters shorter than the second, which is subequal to the third but noticeably longer than the fourth, while the entire plumage, including remiges and rectrices, is stiffer than in the present species. Also, *virescens* appears duller in coloration and with much paler yellow on the belly, while the rictal bristles are much shorter than in *stolzmanni*.

Schiffornis turdinus amazonus (Sclater).

Heteropelma amazonum SCLATER, P. Z. S. London, 28, p. 466, 1860—Chamicuros, Perú; British Mus.

A female from Huachipa, October 4, 1922.

No material for comparison.

The bright cinnamomeous upper wing-coverts are very pronounced in this specimen.

Ampelion rubro-cristatus (D'Orbigny and Lafresnaye).

A(mpelis) rubro-cristata D'ORBIGNY and LAFRESNAYE, Mag. Zool., 7, cl. 2, p. 39, 1837—Ayupaya and Yungas, Bolivia; types in Paris Mus.

Five males and one female from the mountains near Huánuco and Panao, 10,200–10,500 feet, May 31–July 4, 1922.

Compared with fifteen skins from Venezuela, Colombia, Ecuador, and northern Perú.

One male, evidently just reaching maturity, has slightly olivaceous-tinged belly and under wing-coverts, white lateral tips on the tertials, and a white wing bar at the tips of the greater wing-coverts.

Tschudi's first usage of *Ampelion* (Faun. Per., Aves, p. 21, 1845) fixes its type, by monotypy, as *Ampelis rufaxilla* Tschudi. This antedates p. 137 (1846) and also antedates *Heliochera* Filippi (1847). *Ampelion* auctorum is properly *Carpornis* Gray (1846).

These birds were not uncommon in the localities mentioned. Most of them were seen on exposed perches in the tops of trees at the edge of the woods or in more open situations.

Pipreola chlorolepidota Swainson.

Pipreola chlorolepidota SWAINSON, Anim. in Menag., p. 357, 1838—Perú = n. Perú; (♀?); W. Hooker's coll., Cambridge (Eng.) Mus.?

Euchlornis sclateri CORNALIA, Contrib. Orn., 1852, p. 133, pl. 101—Perú, errore = Quijos Ecuador; Milan Mus.

Euchlornis sclateri pallidigula ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., **12**, p. 60, 1924—Huachipa, upper Huallaga R., Perú; Field Mus. Nat. Hist.

The type of *pallidigula* and a second male from Huachipa, October 3 and September 15, 1922.

Compared with two males from the Río Suno, Ecuador (Amer. Mus. Nat. Hist.).

On examination of additional material in European museums, Dr. Hellmayr has concluded that the supposed differences of *pallidigula* are due to individual variation without racial significance, although Ecuadorian birds average larger (wing 74–78 mm. as against 72–75). This conclusion is confirmed by still other specimens which I have examined from northern Perú, in the American Museum of Natural History, although I have made no direct comparison of them with the type of *pallidigula*.

One of these specimens, a female from the Río Seco, west of Moyobamba (Amer. Mus. Nat. Hist., No. 234,954), agrees so perfectly with Swainson's description of *Pipreola chlorolepidota* that there is no remaining doubt that he had a specimen of the bird later named *Euchlornis sclateri* by Cornalia. This positive identification makes it necessary to alter both genus and species of this bird, since Swainson's names are oldest in both instances.

These birds were found at the upper limit of the tropical zone in the heavy forest. Although they were noted in the immediate neighborhood of the vagabond flocks of mixed species, which were

common in the forest at Huachipa, they took little part in the feverish activity of the other birds in the bands, but sat rather quietly high in the trees and made only occasional short and direct flights to other perches. On account of their inactive habits and their resemblance to the color of flower and leaf, they were not conspicuous in spite of their bright plumage.

Ampelioides tschudii (Gray).

Ampelis cincta TSCHUDI (nec KUHL, 1820), Arch. Naturg., 9, (1), p. 385, 1843— Pangoa, Perú; ♀; Berlin Mus.

C(otinga) Tschudii GRAY, Gen. Birds, 1, p. 279, Dec., 1846—new name for *Ampelis cincta* TSCHUDI.

A female from Huachipa, September 22, 1922.

Compared with a single skin from Bogotá.

This example was the only one of the species observed. It was found in the heavy tropical forest and was silent and shy.

Laniocera hypopyrra (Vieillot).

Ampelis hypopyrra VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., 8, p. 164, 1817—"la Guyane" = Cayenne; Paris Mus.?

A skin from Puerto Bermúdez, March 14, 1923.

No material for comparison.

The specimen was sexed as a male but it is unspotted below and the pectoral tufts are yellow like the shoulder patch.

Lipaugus cineraceus (Vieillot).

Ampelis cinerea VIEILLOT (nec LATHAM, 1790), Nouv. Dict. Hist. Nat., nouv. éd., 8, p. 162, 1817—based on "Le Cotinga cendré" of LEVAILLANT; Cayenne.

A(mpelis) Cineracea VIEILLOT, Tabl. Enc. Méth., Orn., 2, livr. 91, p. 761, 1822—based on "Le Cotinga cendré" of LEVAILLANT; Cayenne.

A male from Puerto Bermúdez, March 10, 1923.

Compared with sixteen specimens from the Guianas and northern Brazil.

There are no differences worthy of note in the entire series.

Although only a single specimen was taken, numerous individuals were heard both at Puerto Bermúdez and on the trail from the Chanchamayo Valley to the Pichis River. Their remarkably clear, vibrant, and penetrating whistle, resembling the syllables "whee, whee-oo," with the last note exactly an octave below the first two, was one of the fascinating bird voices of the region. The example I shot had another curious call which sounded like the two ascending

notes of a hen's cackle, abrupt and sharp but not musical like the ordinary song. The birds were shy and retiring, and if one came suddenly into the open, it dashed back into seclusion even more rapidly. At variance with this usual habit, the example I obtained was sitting quietly on a twig in a rather open part of the forest where there was little undergrowth to conceal it.

Lipaugus cryptolophus cryptolophus (Sclater and Salvin).

Lathria cryptolopha SCLATER and SALVIN, P. Z. S. London, 1877, p. 522—Monji, e. Ecuador; British Mus.

One female from Chinchao, November 19, 1922.

No material for comparison.

The species was found in the humid subtropical forest.

Pachyramphus viridis xanthogenys Salvadori and Festa.

Pachyrhamphus xanthogenys SALVADORI and FESTA, Boll. Mus. Zool. Torino, **13**, No. 330, p. 1, 1898—Río Zamora, Ecuador; Turin Mus.

Two males from Vista Alegre, August 19 and 21, 1922.

Compared with a series of fifteen specimens of *P. v. viridis* from Brazil and Argentina.

In the Peruvian birds the belly is less buffy and more whitish; the black cap is longer; the gray nuchal band is wanting; the greater upper wing-coverts have narrower yellowish margins and more black interiorly; the yellow of the anterior under parts is more olivaceous; and the throat and sides of the face are yellow, not white or grayish white. One example of *viridis* from Juá, Iguatú, Ceará, has a decided yellowish suffusion on the throat and sides of the face and the nuchal band is narrow and anteriorly margined with olive green, showing a decided approach to the present form.

Pachyramphus polychopterus niger (Spix).

Pachyrhynchus niger SPIX, Av. Bras., **2**, p. 33, pl. 45, fig. 1, 1825—no loc.; "Amazonas prope Fonteboa" suggested by BERLEPSCH and HARTERT, Novit. Zool., **9**, p. 56, 1902; type lost.

A young male and an adult female from Huachipa, September 15, 1922; an adult male from the Río Colorado, Chanchamayo Valley, February 7, 1923.

Compared with a male from Yurimaguas; five skins of *spixii* from northern Argentina; three *polychopterus* from the states of Bahia, Piauhy, and Maranhão, Brazil; and four *tristis* from Bôa Vista, Brazil; Colón, Venezuela; and Tobago.

The young male from Huachipa is just passing into adult plumage and is as pale gray below and on the rump as *P. p. spixii*, with a blackish chin and a creamy white patch on the throat. The adult male from the Río Colorado agrees with one from Yurimaguas in its blackish coloration and the almost total absence of white on the tertials, scapulars, and inner margins of the remiges, while the young male has considerable white in all these places. Both adult males (Río Colorado and Yurimaguas) differ from a dark colored male of *P. p. tristis* from Bôa Vista, Brazil, in this same respect and in having the glossy steel blue of the top of the head continued farther posteriorly to the hind neck; the young male from Huachipa is not sufficiently advanced in molt to show the extent of this area.

Tityra semifasciata fortis Berlepsch and Stolzmann.

Tityra semifasciata fortis BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 369—La Gloria, Perú; Warsaw Mus.

One male, Huachipa, October 4, 1922.

Compared with a male from Cerro Hosane, Santa Cruz, Bolivia.

Although the Peruvian bird has the wing and tail noticeably shorter than the Bolivian example, the bill is a trifle longer.

Rupicola peruviana peruviana (Latham).

Pipra peruviana LATHAM, Ind. Orn., 2, p. 555, 1790—based on "Le Coq-de-Roche du Pérou" of BUFFON, Hist. Nat. Ois., 4, p. 437; Perú; Chanchamayo suggested by CHAPMAN, 1926.

A male, female, and young male from Huachipa, September 3–October 7, 1922; a female from Chinchao, November 4; a male from Hacienda Buena Vista, Río Chinchao, August 30 (collected by E. Heller).

Compared with three males and two females of *aequatorialis* from Colombia.

The adult Huachipa male has a faint shade of dusky visible beyond the ends of the tertials but the deep black of the basal portions is wholly concealed. The Buena Vista male has the exposed webs of the tertials wholly gray.

The "Tunqui" was found sparingly in the deep forest at Huachipa. Although there was said to be a cliff near-by where they occurred in numbers, the efforts of a guide to show me the place were unsuccessful. When seen, the birds usually were squatting horizontally on a limb of a tree, peering down at me. At a little distance the nasal crest looked surprisingly like a rooster's comb. The alarm note was an unmelodious squawk.

Agriornis montana insolens Sclater and Salvin.

Agriornis insolens SCLATER and SALVIN, P. Z. S. London, 1869, p. 153—Tinta, Dept. Cuzco, Perú; British Mus.

A female from the mountains near Huánuco, 12,200 feet, June 2, 1922.

Compared with seven additional skins from Junín, Cajamarca, Chachapoyas, and Macate, Perú; also with various specimens of *montana, maritima, intermedia,* and *leucura* from Argentina and various parts of Chile.

The Peruvian birds are fairly uniform and all are referable to the same race.

The species was found in the open country of the high temperate zone, perching on weeds and bushes or flying with strong wing-beats from place to place.

Agriornis andicola Sclater.

Agriornis andicola SCLATER (nec *Pepoaza andecola* D'ORBIGNY), P. Z. S. London, 28, p. 78, 1860—Pauza, Chimborazo, Ecuador; British Mus.

Dasycephala albicauda PHILIPPI and LANDBECK, Arch. Naturg., 29, (1), p. 132, 1863—one of the valleys of the cordilleras of Perú = Tacna; Chilean Nat. Mus., Santiago.

Agriornis pollens SCLATER, P. Z. S. London, 1869, p. 153—new name for *Agriornis andicola* SCLATER.

A male from La Quinua, May 15, 1922.

Compared with a male from Putre, Tacna, a male from near Otuzco, and a female from Cajamarca.

Dr. Hellmayr has compared the La Quinua specimen with the type of *andicola* while Mr. K. P. Schmidt has compared the Putre specimen with the type of *albicauda*. While certain differences exist in size and in the buffy or grayish tone of coloration, these differences do not appear to be more than individual.

According to the recommendations under Article 36 of the International Rules of Zoological Nomenclature, *andicola* Sclater, 1860, is not preoccupied by *andecola* D'Orbigny, 1839. In a matter of personal preference I would like to consider these names (as also *Spermophilus* and *Spermophila, Anisognathus* and *Anisognatha, Parulus* and *Parula,* etc.) too nearly alike to warrant the retention of both but see no way to accomplish it without disregarding the International Rules. The American Ornithologists' Union Code is very clear and, to my mind, preferable in this case to the Inter-

national Rules, but it has not been adopted universally. The Committee of the British Ornithologists' Union has adopted even more drastic criteria for the rejection of similar names but those standards are not in general use. The International Rules furnish the only present road toward uniformity in zoological nomenclature and I believe that zoologists should adhere to them in spite of individual dislike of various parts. For this reason I have adopted the specific name used herewith.

Muscisaxicola rufivertex occipitalis Ridgway.

Muscisaxicola occipitalis RIDGWAY, Proc. U. S. Nat. Mus., **10**, p. 430, 1887—Lake Titicaca; U. S. Nat. Mus.

Muscisaxicola rufivertex ruficrissa CORY, Field Mus. Nat. Hist. Publ., Orn. Ser., **1**, p. 342, 1916—Macate, Perú; ♀; Field Mus. Nat. Hist.

One female from La Quinua, May 13, 1922.

Compared with the type of *ruficrissa* Cory and with a female from Cajamarca; also with long series of the Chilean races, *rufivertex* and *pallidiceps*.

The Peruvian birds are easily separable by their darker coloration but are not subdivisible into two forms.

The species inhabits the high open plains.

Muscisaxicola alpina grisea Taczanowski.

Muscisaxicola grisea TACZANOWSKI, Orn. Pér., **2**, p. 213, 1884—Maraynioc, Junín, Perú; formerly Warsaw Mus., now lost.

Two males and a female from the mountains near Huánuco, 12,200 feet, June 20–30, 1922.

Compared with a male from Junín.

The Huánuco birds agree with the Junín specimen except for their slightly smaller size.

Muscisaxicola maculirostris maculirostris D'Orbigny and Lafresnaye.

M(uscisaxicola) maculirostris D'ORBIGNY and LAFRESNAYE, Mag. Zool., **7**, cl. 2, p. 66, 1837—La Paz, Bolivia; Paris Mus.

A female from Chosica, April 15, 1922; two males and a specimen of unknown sex from Matucana, April 28–May 4; a male from Santa Eulalia, April 24; a male from La Quinua, May 13.

Compared with sixteen specimens from various parts of Chile.

There is no localized variation to be found in the complete series. The vertical distribution of the race in Perú is shown by the present material to range from 3,500 to 12,000 feet or from arid tropical to arid temperate.

Muscisaxicola fluviatilis Sclater and Salvin.

Muscisaxicola fluviatilis SCLATER and SALVIN, P. Z. S. London, 1866, p. 187—lower Ucayali, Perú; British Mus.

A single female from Vista Alegre, October 13, 1922.

Compared with two males from Moyobamba and one male from San Ramón, Perú.

The bird from Vista Alegre was secured from a sandy bar in the Río Chinchao completely surrounded by steep, heavily forested hillsides.

Lessonia rufa oreas (Sclater and Salvin).

Centrites oreas SCLATER and SALVIN, P. Z. S. London, 1864, p. 154—Tinta, Dept. Cuzco, Perú; British Mus.

Two males and a female from Huánuco Viejo, December 20, 1922.

Compared with a young male from Lake Junín and a male and female from the Province of Antofogasta, Chile; also with a series of *rufa* from southern Chile and Argentina.

The two series are clearly marked.

The bird occurred in small, vagrant flocks on the high temperate plains.

Myiotheretes striaticollis striaticollis (Sclater).

Taenioptera striaticollis SCLATER, P. Z. S. London, **19** (for 1851), p. 193, pl. 42, June, 1853—Ecuador; Edward Wilson collection, should be in Acad. Nat. Sci. Philadelphia.

Two males and two females from Chinchao, October 23–November 11, 1922; a female from Panao, July 15.

Compared with a female of *pallidus* from the Province of Tucumán, Argentina.

The Peruvian birds are clearly separable by their darker coloration.

At Chinchao this bird was found about the hacienda in exposed places. Locally it was given the general name of "Tapa-mosca."

Cnemarchus erythropygius (Sclater).

Taenioptera erythropygia SCLATER, P. Z. S. London, 19 (for 1851), p. 193, pl. 41, June, 1853—Ecuador; Edward Wilson collection, should be in Acad. Nat. Sci. Philadelphia.

Two males and two females from the mountains near Huánuco, 12,200 feet, June 19–24, 1922.

No material for comparison.

The few examples found were observed perching on the tops of bushes and low trees on the almost perpendicular sides of deep gullies where approach and pursuit were beset with difficulties. They were very alert and took wing at long range, often crossing the gullies or ascending to more precipitous heights, and when they were shot they fell into various almost inaccessible situations. An example, supposedly of this species, was lost at Matucana for this reason. In the air, the birds were light and graceful.

Ochthodiaeta fumigata fumigata (Boissonneau).

Tyrannula fumigata BOISSONNEAU, Rev. Zool., 13, p. 71, 1840—Santa Fé de Bogotá, Colombia; Mus. Comp. Zool.

Three males from Panao, July 10 and 11, 1922.

Compared with two Bogotá skins.

The Panao birds agree with the topotypes in most essential particulars, although the whitish superciliary stripe and subocular space apparently are more marked in the Peruvian birds and the general coloration is darker and more sooty brown. The differences may be due to post-mortem change in the old Bogotá skins.

These birds were heard to utter a soft and rapid "hew-hew-hew-hew . . . ."

Ochthoeca fumicolor brunneifrons Berlepsch and Stolzmann.

Ochthoeca oenanthoides brunneifrons BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 355—Maraynioc, Perú; Berlepsch coll., Frankfort Mus.

Two males and a female from the mountains near Huánuco, 10,500 and 12,200 feet, June 2–21, 1922.

Compared with a female from Molinopampa, one from near Balsas, and a skin of undetermined sex from Sanjas, Ecuador; also with a series of six skins of *fumicolor* from Colombia and western Venezuela.

The Peruvian skins are rather uniform among themselves but a trifle duller than the Ecuadorian bird.

Ochthoeca leucophrys leucometopa Sclater and Salvin.

Ochthoeca leucometopa SCLATER and SALVIN, P. Z. S. London, 1877, p. 19—"W. Peru, Prov. Cuzco"; type from Chihuata, above Arequipa (Chile); British Mus.

Three males from Matucana, April 30, 1922; a male from Cullcui, Marañón River, December 10.

Compared with a male and two females from Putre, Tacna, a male from Macate, and a male from Cajamarca, Perú; also with seven specimens of *tucumana* from the province of Tucumán, Argentina.

The Matucana birds are clearly referable to *leucometopa* of which the Tacna birds are nearly topotypical. The Cullcui specimen is badly worn and faded so that it is difficult to compare it satisfactorily, but it agrees with the Cajamarca specimen and apparently also the Macate skin (in poor condition) in being distinctly paler and browner than the more southern specimens. Whether or not this difference is significant can not be determined with the material at hand. The northern birds are not smaller than the southern and do not seem to be referable to *piurae*.

The subspecies is confined to the arid temperate zone of the western slopes and the Marañón Valley. Birds from the interior belong to a distinct form treated below.

Ochthoeca leucophrys interior subsp. nov.

A male and female from the mountains near Huánuco, 12,200 and 11,000 feet, June 23 and 12, 1922; two males, an adult female, and a young female from La Quinua, May 11–15.

Compared with a male and two females of *leucometopa* from Putre, Tacna, three males from Matucana, a male from Cullcui, Marañón River, a male from Macate, and a male from Cajamarca; also seven skins of *tucumana* from the province of Tucumán, Argentina.

The birds from the Huallaga Valley appear to be distinct and may be described as follows.

Type from the mountains near Huánuco, Peru. Altitude 12,200 feet. No. 59,660 Field Museum of Natural History. Adult male. Collected June 23, 1922, by J. T. Zimmer. Original number 2,442.

Diagnosis.—Similar to *O. l. leucometopa* but upper parts distinctly darker; wings and tail blacker; white of forehead averaging narrower; size averaging smaller.

Habitat.—Humid temperate zone of the central Andes of Perú, at least from the northern boundary of the Junín Plateau northward.

Description of type.—Top of the head Chaetura Black, darker than the mantle which is between Chaetura Drab and Fuscous, becoming brighter on the rump where it is light Vandyke Brown; upper tail-coverts again more dusky. A narrow frontal band of white expands over the lores into a broad superciliary line which reaches to the nape, leaving the lores, a narrow line over the eye, and a postocular band dull black; a small white semilunar patch below the eye; auriculars blackish at tips but with considerable white subbasally. Chin and upper throat whitish, passing into ashy gray on breast, sides, and flanks, the latter with a slight brownish tinge; belly and under tail-coverts rather broadly white. Wings blackish brown; lesser and median upper coverts with faint cinnamomeous tips; greater series with pale terminal margins a little better defined; secondaries and tertials with whitish margins and tips, forming a white patch on the closed wing; under wing-coverts gray; inner margins of remiges dull whitish with a faint cinnamomeous tinge. Rectrices blackish with fine white tips on the outer three pairs; outermost with outer webs white except for a small subterminal dusky area. Bill and feet black. Wing, 76 mm.; tail, 72; exposed culmen, 11; culmen from base, 16; tarsus, 23¼.

Remarks.—The dark coloration of the present race is not surprising in view of the more humid conditions of the territory which it occupies. Probably the birds from the Junín Plateau southward to the Urubamba Valley will be found to be more closely related to this form than to *leucometopa*, but I have no material to determine the point.

Ochthoeca rufi-pectoralis centralis Hellmayr.

Ochthoeca rufipectoralis centralis HELLMAYR, Field Mus. Nat. Hist. Publ., Zool. Ser., 13, No. 5, p. 49, 1927—Panao, Perú; ♀; Field Mus. Nat. Hist.

Five females (including the type) from above Panao, July 3–13, 1922; two males and a specimen of undetermined sex from the mountains near Huánuco, 10,500 and 12,200 feet, June 2 and 3.

Compared with two females from Molinopampa; also with two males and a female of *tectricialis* from the Urubamba region, Perú (U. S. Nat. Mus.), and seven skins of *rufopectus* from Colombia and western Ecuador.

One of the males from near Huánuco has a very distinct second wing band occupying the tips of the median coverts, almost as broad as that on the greater coverts.

The two Molinopampa birds are equivocal. One is exactly matched by Ecuadorian skins of *rufopectus;* the other is less well marked. Probably these specimens are best referable to the Ecuadorian form.

These little flycatchers were found in the open, bushy thickets of the temperate zone, usually near the brooks and springs on the hillsides.

Ochthoeca oenanthoides polionota Sclater and Salvin.

Ochthoeca polionota SCLATER and SALVIN, P. Z. S. London, for 1869, p. 599, 1870—Pitumarca, Dept. Cuzco, Perú; British Mus.

One female and one doubtful female from La Quinua, May 9 and 13, 1922.

Compared with six skins of *oenanthoides,* three from Putre, Tacna, and three from the province of Tucumán, Argentina.

None of the specimens of *oenanthoides* are topotypical since the type locality is La Paz, Bolivia. The Tacna specimens are a little different from the Argentine examples, but in the absence of topotypes I can not say which series is the more typical. In any case the La Quinua birds are markedly distinct from all the others by their much darker coloration throughout, and evidently are referable to *polionota.*

Sayornis nigricans latirostris (Cabanis and Heine).

A(ulanax) latirostris CABANIS and HEINE, Mus. Hein., **2**, p. 68, footn. **, 1859—Bolivia; Berlin Mus.

Sayornis cineracea angustirostris BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 357—La Merced, Chanchamayo, Perú; Warsaw Mus.

Sayornis latirostris fumigatus TODD, Proc. Biol. Soc. Wash., **33**, p. 72, 1920—Don Diego, Santa Marta, Colombia; Carnegie Mus.

Two males and four females from Huánuco, July 20–August 10, 1922.

Compared with three males and three females from Argentina (Jujuy and Tucumán), two males from Ecuador (Puente de Chimbo), a male and female from Colombia (San Augustin and Andalucia), and a male from Venezuela (Colón, Táchira).

The Argentine birds appear to be slightly larger on average than the Peruvian and other specimens, and to have somewhat more

white on the belly and on the edges of the tertials and wing-coverts. However, they are in very fresh plumage while the others are decidedly worn, which may account for much of the apparent difference. Since the type locality is Bolivia and I have no Bolivian material, I am unable to say whether Argentine or Peruvian specimens are the more typical.

Colonia colonus niveiceps subsp. nov.

A male and four females from the Río Colorado, Chanchamayo Valley, January 27–February 25, 1923.

Compared with specimens of various subspecies as listed below.

Type from Poco Tambo, Perú. No. 44,259 Field Museum of Natural History. Adult male. Collected June 29, 1912, by W. H. Osgood and M. P. Anderson. Original number 3,062.

Diagnosis.—Similar to *C. c. colonus* but with forehead much more broadly white, including the crown in the males, and the rest of the top of the head paler than in the same sex of the typical form; central rectrices apparently longer. Similar also to *fuscicapillus* but with the differences in color even more pronounced.

Habitat.—Humid tropical zone of central and northern Perú.

Description of type.—Entirely silky black except for a white patch on the middle of the rump and a pale area on the top of the head; forehead, most of the lores, and the crown to the posterior border of the eyes, snowy white; posterior border of nape also white; intervening occipital and nuchal area faintly grayish with pure white tips, hardly differing from the forehead; crown slightly crested. Median rectrices long and filiform as in the other races. Wing, 85 mm.; tail, except for median plumes, 65; median plumes, 196; exposed culmen, 8; culmen from base, 12; tarsus, 16.

Remarks.—Four other males agree with the type except that the white tips on the occipital and nuchal region are less pronounced, leaving the area generally slightly more in contrast with the white crown and forehead though still distinctly nearer white than in *colonus;* pure white frontal area as broad as in the type. Wing, 84–85 mm.; tail, except for central plumes, 63–65; central plumes, 180–202; exposed culmen, 8¾–10; culmen from base, 14–14½; tarsus, 15–16.

Females similar to the males but with rectricial plumes shorter and top of head darker, though the latter is distinctly paler and with broader frontal band than in *colonus* or *fuscicapillus;* white of head

restricted to a broad band which is pure white for a width of 6 or 7 mm. in median line and sometimes ashy white behind this to the posterior border of the eyes; the frontal area involves the lores and is continued broadly over the eyes to above the auriculars; remainder of crown, occiput, and nape, except as indicated, Pale Mouse Gray or Pale Neutral Gray with the dusky centers sometimes concealed, sometimes more or less exposed. Wing, 75–81 mm.; tail, except for central plumes, (52?)58–65; central plumes, 121–151; exposed culmen, 8–10; culmen from base, 12–14; tarsus, 15½–16.

Specimens examined:

C. c. colonus—Brazil: Rio, Therezopolis 1 ♂ 1 ♀; Rio de las Velhas 1 ♂. Argentina: Misiones, Iguazú 1 ♂ 1 ♀; Eldorado 1 ♂.

C. c. niveiceps—Perú: Poco Tambo 2 ♂ (incl. type); Moyobamba 1 ♂; San Ramón 1 ♂ 1 ♀; Río Colorado 1 ♂ 4 ♀.

C. c. fuscicapillus—Colombia: Bogotá 1 ♀?; Buena Vista 2 ♂[1]; Villavicencio 1 ♂ 1 ♀[1]. Ecuador: Río Suno 3 ♂ 3 ♀[1]; San José 1 ♂ 1 ♀[1].

C. c. poecilonota—British Guiana: Mazaruni River 1 ♀; Conwarook 2 ♀.

C. c. leuconota—Costa Rica: Limon 1 ♂ 3 ♀; Guayabo 1 ♂. Panamá: Colón 2?. Colombia: Quibdo 1 ♀; Cerro Munchique 1 ♂ 1 ♀.

Pyrocephalus rubinus obscurus Gould.

Pyrocephalus obscurus GOULD in DARWIN, Zool. Beagle, 3, pt. 9, p. 45, 1839—Lima, Perú (=melanistic phase); British Mus.

Myiarchus atropurpureus TSCHUDI, Arch. Naturg., **10**, (1), p. 273, 1844—Perú (=melanistic phase); Mus. Neuchâtel.

Pyrocephalus rubineus heterurus BERLEPSCH and STOLZMANN, P. Z. S. London, 1892, p. 381—Lima; Warsaw Mus.

A young male and a female of the melanistic phase from Vitarte, April 26, 1922; also a normal male from Vitarte, April 26, a male and two females from Chosica, April 15–18, and four males and two females from Santa Eulalia, April 19.

Compared with twenty additional skins of *obscurus* from Pacasmayo, Trujillo, Menucucho, Cajamarca, and Hacienda Limón, Perú; Chacalluta, Tacna, "Chile" (now Perú); Milagro, Ecuador, and Cali, Caldas, Medellin, and Bogotá, Colombia; also with a male of *major*

[1]Specimens in American Museum of Natural History, New York.

from Huiro, Perú, a series of *saturatus* from northeastern Brazil, British Guiana, and Venezuela, and a series of *rubinus* from southern Brazil, Argentina, Bolivia, and Yurimaguas, Perú.

I am inclined to agree with Hellmayr that the dark colored birds from the coast of southern Perú are melanic variants of the present race, although with only two specimens it is impossible to make a thorough comparison. I found no difference in habits of the two in the field and shot a normal male and a dark female from the same tree at Vitarte where they were apparently in company, having flown to the tree together. One Santa Eulalia female is nearly as dark above as the melanistic female and with the same reddish suffusion throughout the gray of the back; below it is more broadly streaked than the other females and generally darker in coloration, suggesting a tendency toward melanism which has not progressed far.

The Tacna birds are a little paler than the Rimac Valley specimens. One male has a wing of 84 mm., another has 80, and the third 78, while the normal Vitarte male also has a wing of 80, and a Santa Eulalia male 78; these birds measure as large as, or larger than, the measurements given for *P. r. major* (wing 78–82; Hellmayr, 1927), which may be unworthy of recognition.

This pretty flycatcher was found in the more or less open country, finding its perches with equal readiness on the tops of weeds and bushes and in the scattered trees of the valley floor.

Muscigralla brevicauda D'Orbigny and Lafresnaye.

Muscigralla brevicauda D'ORBIGNY and LAFRESNAYE, Mag. Zool., **7**, cl. 2, p. 61, 1837—Tacna, Perú; Paris Mus.

Three males and one female from Vitarte, April 26, 1922.

Compared with two males and two females from Pacasmayo, and two males and a female from Trujillo.

No differences are apparent in the series.

This curious little bird inhabited the grasses and weeds in the seclusion of the cotton fields and at the edges of the roads, where it ran and sought concealment at slight provocation. Occasionally it took wing for short distances, rising only enough to clear the surrounding vegetation.

Tyrannus melancholicus melancholicus Vieillot.

Tyrannus melancholicus VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., **35**, p. 48, 1819—based on AZARA'S No. 198; Paraguay.

Muscicapa furcata SPIX, Av. Bras., 2, p. 15, pl. 19, 1825—Brazil; Munich Mus.

Tyrannus roseus LESSON, Traité d'Orn., p. 382, 1831—no loc. =s. Brazil; Paris Mus.

A male from Chosica, April 15, 1922; a female from Santa Eulalia, April 19; three males and three females from Huánuco, May 27–August 9; a female from Vista Alegre, August 17; a male and a female from Huachipa, October 3 and 5; and two males from Chinchao, October 27 and November 12.

Compared with skins from San Ramón, Hacienda Limón, Menucucho, Chachapoyas, Rioja, Moyobamba, and Yurimaguas, Perú, and a large series from various localities in northern Argentina, southern Brazil, Colombia, and northwestern Venezuela; also with seventy-four skins of *despotes* from northern Brazil, British Guiana, parts of Venezuela, and Curaçao, Aruba, and Tobago islands.

A common bird in the open country of the tropical and subtropical zones.

Legatus leucophaius nevagans Chubb.

Legatus variegatus nevagans CHUBB, Bull. Brit. Orn. Club, **40**, p. 43, 1919—Costa Rica, Panamá, and Colombia; British Mus.

A male and female from Vista Alegre, August 27 and October 11, 1922.

Compared with eighteen skins from Perú (Yurimaguas), Bolivia, Argentina, Brazil, British Guiana, Colombia, Panamá, Costa Rica, and Nicaragua; also with a single skin of *variegatus* from Guatemala.

The birds from Nicaragua to Colombia (Bogotá) are recognizably distinct from the Guianan, Brazilian, Argentine, and Bolivian skins by their brighter yellow under parts, with a noticeable suffusion of yellow on the breast. The Vista Alegre birds seem to be a little more greenish in tone than the northern (western) specimens but belong better with them than with the eastern birds. The Yurimaguas specimen is not so clearly marked but is in molt and is difficult to compare. If this western form is really separable, as it appears in the material before me, it must bear the name *nevagans*. A larger series may show the Peruvian birds to be still further distinct but I am unable to demonstrate it at present.

Chubb's *Legatus albicollis successor* is a strict synonym of *leucophaius*. If the Paraguayan bird should prove to be distinct (as does not seem probable on comparison of Argentine, Brazilian, and Guianan specimens) it has a name available in Vieillot's *albicollis*.

Myiodynastes luteiventris Sclater.

Myiodynastes luteiventris SCLATER, P. Z. S. London, 27, p. 42, 1859—Orizaba, Mexico; British Mus.

Myiodynastes luteiventris vicinior CORY, Field Mus. Nat. Hist. Publ., Orn. Ser., 1, p. 342, 1916—Yurimaguas, Perú; Field Mus. Nat. Hist.

A male and female from Río Colorado, Chanchamayo Valley, January 30 and February 7, 1923.

Compared with the type of *vicinior* from Yurimaguas, a male from Tres Arroyas, Bolivia, and thirty-two skins from Arizona, Mexico, Guatemala, and Costa Rica.

The Bolivian bird is inseparable from most of the Central American specimens. The Río Colorado examples are darker and greener on the back than most of the northern specimens but an occasional individual of the latter is hardly different from these two, indicating that the variation is probably individual. The type of *vicinior* is a young bird.

There is a little doubt about the type and type locality of this species. Bonaparte used the name without description for a species found in the material collected in Nicaragua by Delattre. Sclater, in 1856, referred a specimen from Córdoba, Vera Cruz (collected by Sallé) to *audax* (=*maculatus*) but said it was a little different from that species in particulars which he described. Later, in 1859, Sclater, having obtained new material, described *luteiventris* in detail with synonymic reference to his so-called *audax* of 1856. He gave a general account of distribution without a definite type locality and added "Mus. P.L.S." The only specimens in his own collection were two from Orizaba (ex Botteri), now in the British Museum. Either Sallé's Córdoba skin, the present whereabouts of which is not known, is the type by inference or else the Orizaba skins are co-types, and since these latter are still in existence I believe it is best to consider them as the actual specimens on which the full description of *luteiventris* was based.

Myiodynastes solitarius (Vieillot).

Tyrannus solitarius VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., 35, p. 88, 1819—based on AZARA, No. 196; Paraguay; no type specimen.

A male and female from Río Colorado, Chanchamayo Valley, January 30 and February 16, 1923; a female from Vista Alegre, August 18, 1922.

Compared with five skins from Uruguay, two from Argentina, two from Bolivia, two from British Guiana, and thirteen from eastern Brazil.

The Peruvian birds seem to be inseparable from the rest of the series.

Myiodynastes chrysocephalus chrysocephalus (Tschudi).

Sc(aphorhynchus) chrysocephalus TSCHUDI, Arch. Naturg., **10**, (1), p. 272, 1844—Perú; Valley of Chanchamayo suggested by Hellmayr, 1927; Mus. Neuchâtel.

A male from Chinchao, November 16, 1922.

Compared with a male and female of *minor* from La Frijolero and Salento, Colombia; a male and female of *intermedius* from Mérida and Táchira, Venezuela; and three males and four females of *hemichrysus* from Coliblanco, Costa Rica.

The Peruvian bird apparently is referable to typical *chrysocephalus* of which I have no topotypical material.

Myiozetetes similis connivens Berlepsch and Stolzmann.

Myiozetetes similis connivens BERLEPSCH and STOLZMANN, Ornis, **13**, p. 87, 1906—Santa Ana, Urubamba Valley, Perú; Warsaw Mus.

Two males from Vista Alegre, August 20 and 22, 1922; a male and two females from Chinchao, October 30–November 16.

Compared with six males and two females from Moyobamba; also with six specimens of *similis* from Arara, Codó, Rosario, Serra Baturité, and Victoria, Brazil, and Iguazú, Misiones, Argentina; and with twenty-six skins of *columbianus* from Panamá, Colombia, and Venezuela.

If *connivens* is distinct from *similis*, the above Peruvian birds are referable to it, but it is a very poor subspecies. The authors themselves admitted that some of the characters were not constant and that the race was of doubtful value. The present series bears out that statement. Some of the skins are inseparable from Brazilian ones and even the most strongly marked are not very different, but since there is a slight average difference in coloration and a name is already provided for the Peruvian birds, the name may be preserved. As shown in the material at hand, *connivens* has a trifle less rufescence on the edges of the remiges and sometimes has a little stronger tinge of yellow on throat and superciliaries, while the back averages a little greener. In coloration it is intermediate between *similis* and the smaller *columbianus*.

The ordinary flight of this species is noiseless but, on occasion, the bird makes use of a sharp and vibrant flutter of its wings, given in short bursts, which is audible at some little distance.

One of the birds was kept as a pet at Vista Alegre and was allowed perfect freedom. Several times when I was collecting in rather close proximity to the hacienda, I nearly shot this bird by mistake for a wild one but was prevented by its friendly and knowing actions which made me realize my mistake in time. Locally the species was known as "Shipilico," in fancied imitation of its soft, chattering note.

Pitangus lictor subspecies.

Lanius lictor LICHTENSTEIN, Verz. Doubl. Berliner Mus., p. 49, 1823—Pará; Berlin Mus.

One female from San Enrique, lower Río Ucayali, March 25, 1923.

Compared with a male from São Luis, Maranhão, Brazil; two females from Descalvados, Matto Grosso; a male from Georgetown, British Guiana; a probable female from Demerara; a female and two males from La Ceiba, Maracay, and Río Araure, Venezuela; and a female and two males from Barro Colorado Island and Colón, Panamá, and Turbo, Atrata River, Colombia.

The arrangement of this material is very puzzling. The east-Brazilian, Guianan, and Venezuelan skins appear to represent typical *lictor* although the Demerara bird is small (wing 83 mm. as against 86–92 for the males and 87 for the female). All agree in having a relatively pale back. The Matto Grosso females are equally large or larger (wing 89–90 mm.) but have the back noticeably darker. The Peruvian bird has the back the darkest of all but is small (wing 83 mm.). The north-Colombian and Panamán examples are quite small (wing of male 77 mm., of the females 82–83), but match the Matto Grosso birds in the color of the back. These three northern birds should be referable to *P. l. panamensis*.

Without more material to determine whether *panamensis* may range southward and meet *lictor* in western Brazil or whether it is restricted to the extreme northwestern part of the South American continent and southern Central America, I can not place this single Peruvian skin satisfactorily.

Myiarchus cephalotes cephalotes Taczanowski.

Myiarchus cephalotes TACZANOWSKI, P. Z. S. London, 1879, p. 671—Tambillo, Perú; formerly Warsaw Mus., now lost.

A male from Vista Alegre, August 22, 1922; four males and two females from Chinchao, October 23–November 20.

Compared with a male and a female from Uchco and Molinopampa, Perú, and a female from La Palma, Colombia; also with a specimen of *caribbaeus* from Maracay, Venezuela.

The Peruvian birds are not subdivisible though varying a certain amount among themselves in the shading of the crown and the brightness of the white stripe on the outer web of the outermost rectrices. The Colombian skin approaches *caribbaeus* in the amount of green in the olive of the back and in the somewhat tawny edges on the feathers of the crown, but in the wide bill and lesser amount of white on the outermost rectrices it agrees with the Peruvian birds.

Myiarchus tuberculifer tuberculifer (D'Orbigny and Lafresnaye).

T(yrannus) tuberculifer D'ORBIGNY and LAFRESNAYE, Mag. Zool., 7, cl. 2, p. 43, 1837—Guarayos, Bolivia; Paris Mus.

Myiarchus gracilirostris PELZELN, Orn. Bras., 2, pp. 117, 183, 1868—Villa Maria (=San Luis de Caceres), Matto Grosso, Brazil; Vienna Mus.

Myiarchus coalei RIDGWAY, Proc. U. S. Nat. Mus., 9, p. 520, 1887—Orinoco Valley; U. S. Nat. Mus.

A male from the Río Colorado, Chanchamayo Valley, January 31, 1923.

Compared with three males and a female from Buena Vista, Santa Cruz, Bolivia; Serra Grande, Rio Branco, Brazil; and Mérida and Encontrados, Venezuela; also with thirteen skins of *atriceps* from central and northern Perú (cf. account of *atriceps*).

The Río Colorado specimen agrees with the other skins of this subspecies in the brownish cap and paler yellow under parts. This race, apparently, is confined to the tropical zone.

A specimen from Moyobamba is referred here tentatively. It is not fully mature and the head is very pale with a few new feathers appearing on the crown. These new plumes are darker than the old feathers but are not black enough for *atriceps*.

Myiarchus tuberculifer atriceps Cabanis.

Myiarchus atriceps CABANIS, Journ. Orn., 31, p. 215, 1883—San Xavier, Tucumán, Argentina; Berlin Mus.

Four males and four females from Huánuco, July 20–August 10, 1922; a female from Panao, July 10; a male from Huachipa, October 4; and a female from Chinchao, November 11.

Compared with two males from Hacienda Llagueda and Hacienda Limón, northern Perú; also with five skins of *tuberculifer* from the Chanchamayo Valley, Perú, and from various localities in Bolivia, Brazil, and Venezuela (cf. account of *tuberculifer*).

This race is distinguishable from *tuberculifer* by the long and distinctly black crest which shows a greenish sheen in certain lights, and also by the rather deeper yellow of the under parts. It inhabits higher elevations than *tuberculifer* of which it appears to be a zonal, as well as geographical, representative. The specimen from Huachipa (4,600 feet) should be assigned to the subtropical zone which meets the tropical zone at this point. The other localities are subtropical to lower temperate. The bird's note was a soft "see-ur."

Nuttallornis mesoleucus (Lichtenstein).

Muscicapa mesoleuca LICHTENSTEIN, Preis-Verz. Mexic. Vögel, p. 2, 1830—Mexico = Oaxaca; Berlin Mus.

A male from Río Colorado, Chanchamayo Valley, January 26, 1923.

Compared with a series of twenty-seven skins from central and western United States, and Costa Rica.

The Peruvian bird is badly worn and beginning its prenuptial molt. It has a wing length of only 99¼ mm., and tail length of 63 mm. and is therefore referable to typical *mesoleucus* whether or not the western form *majorinus* is recognized.

Myiochanes virens (Linnaeus).

Muscicapa virens LINNAEUS, Syst. Nat., 12th ed., 1, p. 327, 1766—based on *Muscicapa carolinensis cinerea* BRISSON, Orn., 2, p. 368, 1760; Carolina.

A female from Vista Alegre, October 11, 1922, and two females from the Río Colorado, Chanchamayo, January 26 and February 7, 1923.

Compared with large series of North and Central American examples of *virens* and *richardsonii*.

The two Río Colorado birds are in nearly completed molt and are unquestionably referable to *virens;* the Vista Alegre bird is not so easily identifiable. It is in exceedingly worn and faded plumage, in the very beginning of molt, and appears to compare well with *richardsonii* but it is almost exactly matched by a female of *virens* from Beaver Dam, Wisconsin, taken on September 10, 1903, which is also in worn autumnal plumage. Furthermore, there are on the

crown a few new feathers of a blackish color much too dark for any *richardsonii* that I have at hand, all of which points to the conclusion that this bird also is *virens*.

Myiochanes cinereus punensis (Lawrence).

Contopus punensis LAWRENCE, Ann. Lyc. Nat. Hist. N. Y., 9, p. 236, 1869—Puna Island, Ecuador; U. S. Nat. Mus.

A male and female from Santa Eulalia, April 20 and 23, 1922.

Compared with four males and a female from Hacienda Limón, and two males from Hacienda Llagueda, Perú; also with six skins of *cinereus* from São Paulo, Brazil, and Misiones, Argentina; the type and four other skins of *pallescens* from Bahia, Maranhão, and Matto Grosso, Brazil, and Tucumán, Argentina; and six examples of *bogotensis* from Caracas and Aragua, Venezuela.

Peruvian birds have a much larger bill than any of the other races mentioned.

Empidonax traillii traillii (Audubon).

Muscicapa traillii AUDUBON, Birds Amer., folio, 1, pl. 45, 1828 (Orn. Biog., 1, p. 236, 1831)—woods along Arkansas River, Arkansas; U. S. Nat. Mus.

Empidonax traillii alnorum BREWSTER, Auk, 12, p. 161, 1895—Upton, Maine; Mus. Comp. Zool.

A female from Vista Alegre, October 11, 1922.

Compared with numerous specimens of *traillii* and *brewsteri* from North and Central America.

The Peruvian bird is in worn plumage but appears to agree best with the eastern race.

Empidonax euleri argentinus (Cabanis).

Empidochanes argentinus CABANIS, Journ. Orn., 16, p. 196, 1868—Buenos Aires, Argentina; Berlin Mus.

A female from Vista Alegre, August 27, 1922.

Compared with a male of *argentinus* from Concepción, Tucumán; also with a male and female of *euleri* from Quebrado de los Cuervos, Uruguay, a female and two unsexed birds from Eldorado, Misiones, Argentina, a male from Rio de las Velhas, Minas Geraës, Brazil, and a female from Yurimaguas, Perú.

The Vista Alegre specimen has been compared by Dr. Hellmayr with the type of *argentinus* and found to agree closely. The Tucumán example has the white of the throat modified to grayish and

that of the belly a little restricted (the dark flanks being broader), but it lacks the pronounced yellowish tone of the under parts and is closer to *argentinus* than to *euleri*.

The Yurimaguas bird is much closer to *euleri* than to *argentinus;* in fact it is even more yellowish below and richer brown above, especially on the top of the head, than any of our series of the typical form. Possibly a series from the region of Yurimaguas would show a recognizable distinctness which would aid in solving the problem of what is otherwise a very puzzling distribution.

Cnemotriccus poecilurus peruanus (Berlepsch and Stolzmann).

Empidochanes poecilurus peruanus BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 366—Garita del Sol, Perú; Warsaw Mus.

Four males and four females from Chinchao, October 22–November 10, 1922.

No material for comparison.

Judging by descriptions, this race can not be very well marked; most of my specimens have more than a mere subapical spot of dusky on the outermost rectrix and at least one example has the dusky area continued well toward the base beneath the under tail-coverts. Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 522, 1926) has been unable to recognize *peruanus*, though Hellmayr (Field Mus. Nat. Hist. Publ., Zool. Ser., **13**, pt. 5, p. 226, 1927) has admitted it. Quite probably it is not entitled to recognition but I hesitate to submerge it until I have seen more material.

The bird was common about the coca plantation at Chinchao. In life the eye varied from orange to crimson.

Mitrephanes phaeocercus olivaceus Berlepsch and Stolzmann.

Mitrephanes olivaceus BERLEPSCH and STOLZMANN, Ibis, (6), **6**, p. 391, 1894—Garita del Sol, Vitoc, Perú; Warsaw Mus.

Two males and an immature bird of undetermined sex from Huachipa, September 11–October 7, 1922.

Compared with a young female from Uchco; also with eight males and one female of *aurantiiventris* from Costa Rica and a male of *nicaraguae* from the type locality.

The adult Peruvian birds are much greener throughout than the other forms examined, but the young birds are much buffier, showing the probability that the pale northern forms are the most ancient. The young bird from Huachipa, collected September 15, may be described as follows.

Sides of head Tawny Olive; forehead darker; middle of crown with a blackish crest tipped with Tawny Olive; back pale, dull brown tipped with Cinnamon-Buff (a few greenish feathers of adult plumage appearing); rump Pinkish Buff; upper tail-coverts dusky with buffy tips giving a spotted appearance. Breast Tawny Olive; throat paler; belly much paler, Pinkish Buff. Upper wing-coverts rather broadly tipped with cinnamomeous buff; inner secondaries edged with greenish; tertials broadly edged with buff; all remiges narrowly tipped with pale buff. Rectrices obtusely pointed, edged with Dark Olive on outer margins and tipped with buff.

Myiobius barbatus amazonicus Todd.

Myiobius barbatus amazonicus TODD, Proc. Biol. Soc. Wash., **38**, p. 96, 1925—Hyutanahán, Rio Purús, Brazil; Carnegie Mus.

A female from Puerto Bermúdez, March 19, 1923.

Compared with three skins of *barbatus* from Saint Laurent du Maroni, French Guiana, and the Caramang River and Mazaruni River, British Guiana; and with one female and two males of *semiflavus* from El Tambor, Colombia (Carnegie Mus.).

The Peruvian bird appears to be referable to the west-Brazilian subspecies.

Myiobius villosus peruvianus Todd.

Myiobius villosus peruvianus TODD, Proc. Biol. Soc. Wash., **35**, p. 32, 1922—Río Tavara, southeastern Perú; Carnegie Mus.

A male and two females (one of the latter immature) from Huachipa, September 22 and October 2, 1922.

No material for comparison.

The specimens agree with Todd's description. Chapman refers east-Ecuadorian birds to the same form.

The rictal bristles of this species are as long as, or longer than, the bill and form a veritable basket surrounding the mouth—useful, no doubt, in the birds' activities of catching small insects on the wing. The specimens were taken along the trails and in the more open portions of the heavy tropical forest.

Myiobius atricaudus portovelae Chapman.

Myiobius atricaudus portovelae CHAPMAN, Amer. Mus. Novit., **138**, p. 3, 1924—Porto Velo, Ecuador; Amer. Mus. Nat. Hist.

A male from the Río Colorado, Chanchamayo Valley, February 25, 1923.

Compared with a male from Pambilar and a female from Puente de Chimbo, Ecuador, and two females (one immature) from Moyobamba, Perú; also with the type and five paratypes of *snethlagei* from northeastern Brazil.

The Puente de Chimbo bird is much brighter colored above and below than any of the others; the Peruvian and Pambilar examples are fairly well matched.

Pyrrhomyias cinnamomea cinnamomea (D'Orbigny and Lafresnaye).

M(uscipeta) cinnamomea D'ORBIGNY and LAFRESNAYE, Mag. Zool., 7, cl. 2, p. 49, 1837—Yungas, Bolivia; Paris Mus.

A male and female from Vista Alegre, August 21 and 28, 1922; a female from Huachipa, September 21.

Compared with three skins of *pyrrhopterus* from Colombia and a female from near Balsas, northern Perú.

The Balsas bird agrees better with the Colombian skins than with the other Peruvian birds in the somewhat browner back, paler rump patch, and more extensive rufous band on the wing, but it is not fully adult and therefore not entirely comparable. Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 517, 1926) states that Ecuadorian skins are not always typical of *pyrrhoptera*. Apparently transition to *cinnamomea* takes place over a wide area which includes the more northern parts of Perú. Huachipa and Vista Alegre birds are typical *cinnamomea*.

Myiophobus rufescens (Salvadori).

Myiobius rufescens SALVADORI, Atti Soc. Ital. Sci. Nat., 7, p. 152, 1864—"Brazil," errore; I suggest Lima, Perú; Turin Mus.

Four males and one female from Santa Eulalia, April 19–23, 1922; a female from Chosica, April 16.

Compared with a male from Callao, a male from Trujillo, and a male and an unsexed example from Menucucho; also with a series of *M. fasciatus crypterythrus* from Hacienda Limón, near Balsas, Perú, and Puente de Chimbo, western Ecuador, and one skin of *M. f. saturatus* from Moyobamba.

One of the Santa Eulalia males and the unsexed Menucucho bird have the crown patch bright lemon yellow, and the Chosica female has the area dull and pale rufescent with a touch of yellow. The other adult examples have the crown patch decidedly rufescent.

The same variation occurs in *M. fasciatus crypterythrus* and may indicate close relationship with the present form. Most of the skins in the present series of *rufescens* show traces of obsolete dusky streaks on the breast and sides and some specimens of *crypterythrus* have a varying amount of rufescence on the bend of the wing and the bands on the upper wing-coverts, in which respects the two series show a slight approach. The general coloration of the upper surface is more similar than that of the under parts and the details of structure in the two forms can be matched rather closely. A careful study of adequate material may show that *rufescens* is entitled to no more than subspecific rank. There is no conflict in distribution.

Hirundinea ferruginea sclateri Reinhardt.

H(irundinea) Sclateri REINHARDT, Vidensk. Medd. Naturhist. Foren., 1870, p. 377, in text—Perú; Copenhagen Mus.

A male and a female from Chinchao, November 17, 1922.

Compared with two males and four females of *bellicosa* from Therezopolis, Rio; Quixada, Ceará; Tranqueira and Inhuma, Maranhão; and Rio de las Velhas, Brazil; also with a female of *pallidior* from Catamarca, Argentina.

The male from Chinchao has rufescent tips on the upper wing-coverts, lower back, and rump. A female of *bellicosa* from Therezopolis and another from Inhuma have dusky subterminal spots on the upper tail-coverts, and other skins of *bellicosa* and one of *pallidior* show traces of the same marking. The rufous band on the central rectrices crosses both webs in *bellicosa* and *pallidior* but is sometimes entirely concealed beneath the upper coverts, while in *sclateri* the band crosses only the inner web but reappears at the outer margin of the outer web and is not always entirely concealed by the coverts. The other differences are merely those of relative size, greater or lesser extent of certain patches of color, and the depth of hue, all differences of degree. Consequently I consider these forms as subspecies of the same group.

The Chinchao birds were found on the rather open hillsides in the arid subtropical zone. Their flight was graceful and direct when passing from perch to perch but swallow-like when in pursuit of food.

Platyrinchus flavigularis (Sclater).

Platyrhynchus flavigularis SCLATER, P. Z. S. London, 1861, p. 382—Bogotá, Colombia; British Mus.

Two males from Huachipa, September 26 and October 1, 1922.

Compared with four females from Colombia (La Candela and Bogotá).

The Peruvian birds are slightly richer in color, the greater upper wing-coverts are tipped with cinnamomeous (barely indicated in one Colombian skin), and the first (outermost) primary is two millimeters longer than the sixth instead of about equal to it. Since the Peruvian birds are males and the Colombian are females (possibly excepting one which is not sexed and is in molt), it is impossible to say if the differences are sexual, racial, or (in part) ontogenetic.

This species combines the characters of *Platyrinchus*, *Platytriccus*, and *Placostomus* in such a way as to break down the generic distinctness of these groups. All three agree in their general characters of short tail, dwarfed size, and broad flat bill which thus appear to be of greater taxonomic value as generic characters than are the more variable features which have been used for the separation of the three supposed groups.

The birds were found in the heavy forest though in the lesser growth near the ground, and were very quiet in habits.

Platyrinchus mystaceus zamorae (Chapman).

Platytriccus albogularis zamorae CHAPMAN, Amer. Mus. Novit., **118**, p. 5, 1924—Zamora, e. Ecuador; Amer. Mus. Nat. Hist.

A male from Huachipa, October 6, 1922; a female (immature) from Chinchao, November 16.

Compared with a female of *albogularis* from Puente de Chimbo, western Ecuador, a male of *neglectus* from Panamá, and a series of typical *mystaceus* from the states of Minas Geraës, São Paulo, and Maranhão, Brazil, and Misiones, Argentina.

The Peruvian male is very close to the specimen of *neglectus* in most details but is perhaps a trifle more brownish olive above. The female is immature and has the mantle still in juvenal plumage and strongly suffused with brown, being useless for comparison.

This little flycatcher inhabited the seclusion of second-growth thickets and groves where it was very inconspicuous.

Platyrinchus coronatus coronatus (Sclater).

Platyrhynchus coronatus SCLATER, P. Z. S. London, **26**, p. 71, 1858—Río Napo, Ecuador; British Mus.

A male from Puerto Bermúdez, March 17, 1923.

Compared with six examples of *superciliaris* from Costa Rica, Panamá, and Nicaragua.

The Peruvian bird is much duller and browner than the Central American specimens. I have not seen topotypes of *coronatus*.

Rhynchocyclus fulvipectus (Sclater).

Cyclorhynchus fulvipectus SCLATER, P. Z. S. London, 28, p. 92, 1860—Nanegal, Ecuador; British Mus.

A female from Chinchao, November 14, 1922.

Compared with a male from Uchco, Perú.

No topotypical material is available for comparison. There is no indication of variation in the Chinchao and Uchco birds.

Rhynchocyclus olivaceus guianensis McConnell.

Rhynchocyclus olivaceus guianensis MCCONNELL, Bull. Brit. Orn. Club, 27, p. 106, 1911—Abary River, British Guiana; British Mus.

Craspedoprion intermedius TODD, Ann. Car. Mus., 8, p. 207, 1912—Río Yuruán, Venezuela; Carnegie Mus.

A male from Puerto Bermúdez, March 19, 1923.

Compared with a male from Tury-assú, Maranhão, Brazil; also with a female of *flavus* from Orope, Venezuela, a female of *bardus* from Panamá, and the type of *olivaceus* (in the Upsala Museum), probably from near Rio de Janeiro.

The material is totally inadequate to permit a satisfactory study of this species. My bird is exactly intermediate in most characters between the Tury-assú specimen of *guianensis* and the Orope skin of *flavus*, being darker than the latter and lighter than the first though with the wing lining more cinnamomeous than in either. Dr. Hellmayr advises me, however, that he was able to match every character of the Puerto Bermúdez bird in a series of five skins of *guianensis* from Venezuela and French Guiana. For this reason my bird must, for the present, be referred to *guianensis*.

Todirostrum latirostre caniceps (Chapman).

Euscarthmus latirostris caniceps CHAPMAN, Amer. Mus. Novit., 118, p. 7, 1924—Florencia, Colombia; Amer. Mus. Nat. Hist.

Three males and two females from Vista Alegre, October 11 and 12, 1922.

Compared with a male(?) and female of *latirostre* from Todos Santos, Bolivia.

The Vista Alegre birds are separable from the Bolivian by the characters given for *caniceps*, of which I have seen no other examples.

Todirostrum cinereum peruanum subsp. nov.

Four males from Vista Alegre, August 17–October 12, 1922; a male from Chinchao, October 22; a male from Río Colorado, Chanchamayo Valley, February 14, 1923; and a female from Puerto Bermúdez, March 9, 1923.

Compared with sixty-three additional skins from other parts of Perú, western Ecuador, Colombia, Venezuela, British Guiana, and Surinam, including the type and two other skins of *T. viridanum* (see appended list).

A study of this material has resulted in the discovery of certain well-marked characters which justify the separation, as a new subspecies, of those birds occupying most of Perú except the northeastern portion. Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 486, 1926) has noted the similarity of Peruvian and east-Ecuadorian birds in certain respects and it is probable that the characters of the new race will be found in material from eastern Ecuador upon search. I have no specimens from that region to determine the point.

Type from Vista Alegre, Perú. Altitude 4,100 feet. No. 59,732 Field Mus. Nat. Hist. Adult male. Collected October 11, 1922, by J. T. Zimmer. Original number 3,021.

Diagnosis.—Nearest to *T. c. cinereum* of the Guianas, Venezuela, Colombia, and northern Brazil, but with much more black on the head, reaching farther posteriorly on the occiput, embracing the auriculars, and invading the malar region where it occupies all but the terminal margins of the feathers from the base of the mandible to the median line of the eye, forming a distinct (though sometimes concealed) black stripe obscured by narrow yellow tips; yellow tips of nasal plumes lacking or at least only faintly indicated in the males, slightly more noticeable in the females; back darker gray with less olivaceous tone. Back darker gray than in *coloreum* or *cearae;* throat yellow, not white as in *sclateri*.

Habitat.—Humid tropical and lower subtropical zones of Perú, except the extreme northwestern portion, and probably eastern Ecuador.

Description of type.—Whole top and sides of the head deep black including the auriculars and a stripe on the malar region from the base of the mandible to the median line of the eye; feathers of the

malar stripe narrowly tipped with yellow. Hind neck Blackish Slate; back a little paler gray with a trace of olivaceous on the rump; upper tail-coverts black. Entire under parts, including under wing-coverts, between Lemon Yellow and Pale Lemon Yellow. Upper wing-coverts black; lesser series tipped with the color of the back; median series tipped with bright Martius Yellow; greater series with outer margins broadly Martius Yellow; alula black with narrow yellow outer margins; primary-coverts black with a narrow yellow border on the outermost; bend of wing Lemon Yellow; remiges slightly fuscous black with greenish yellow outer margins, narrow on primaries, broader on secondaries and passing around the tips, equally broad and internally whitish on the tertials; inner margins of quills yellowish white. Rectrices black with white tips, narrow on middle pair, much wider on the outer two pairs and extending toward the base of the feathers broadly on the outer webs. Iris yellowish white; bill black, narrowly tipped with white; feet pale slate color. Wing, 47 mm.; tail, 35; exposed culmen, 13; culmen from base, 17; tarsus, 19.

Remarks.—Ten males measure: wing, 44–48 mm.; tail, 35–38½; exposed culmen, 12½–14½; culmen from base, 16–17; tarsus, 18–19½.

Females are similar to the males or a little paler gray on the back, and with the black of the head somewhat narrower though still present on the malar region; nasal plumes with a little more prominent yellowish tips. Wing, 43–46 mm.; tail, 32–36; exposed culmen, 12–14; culmen from base, 16½–18; tarsus 18–19¼.

The Moyobamba males have very faint yellowish tips on the nasal plumes which are not apparent except on search; they are absent in the other males. Both females from Moyobamba and that one from Poco Tambo have one or more feathers in the middle of the crown marked with white, a character sometimes present in *cearae* and strongly marked in *T. viridanum*.

This bird was found mostly in the bushy second-growth in more or less open situations. A pair at Chinchao were constructing a very pretty nest which had an overhanging roof above the side entrance. No eggs had yet been laid on October 22. In moving about through the vegetation, the bird carries its tail erect and wags it in all directions.

Material examined:

T. c. peruanum—Perú: Vista Alegre 4 ♂(including type); Chinchao 1♂; Río Colorado, Chanchamayo 1♂; Puerto

Bermúdez 1 ♀; Moyobamba 4 ♂ 2 ♀; Poco Tambo 1 ♀; San Ramón 1 ♀.

T. c. cinereum—Surinam: Paramaribo 1 ♂. British Guiana: Georgetown 1 ♂ 1 ♀. Venezuela: Encontrados 2 ♂ 1 ♀ 1?; Caracas 7 ♂ 1 ♀ 1?; Macuto 1 ♀; Maracay 6 ♂ 3 ♀ 1?; La Ceiba 1 ♂; Catatumbo R. 2 ♂; Orope 1 ♂. Colombia: Puerto Valdivia 1 ♂; Cuenta 1 ♂; Bogotá 4?. Brazil: Bôa Vista 1 ♂; Serra da Lua 1 ♂.

T. c. cearae—Brazil: Serra Baturité 1 ♂ (type); Deserto, Piauhy 1 ♀; Ibiapaba, Piauhy 2 ♂; Tury-assú, Maranhão 1 ♂; São Bento, Maranhão 1 ♂; Rosario, Maranhão 1 ♂ 1 ♀; Codó, Cocos, Maranhão 1 ♀; Barra do Corda, Maranhão 1 ♀.

T. c. coloreum—Brazil: Descalvados, Rio Paraguay 1 ♀.

T. c. sclateri—Ecuador: Puente de Chimbo 1 ♂; San Javier 1 ♂.

T. viridanum—Venezuela: Río Araure 1 ♂ (type) 1 ♀; Maracaibo 1 ♂.

Lophotriccus vitiosus vitiosus (Bangs and Penard).

Cometornis vitiosus BANGS and PENARD, Bull. Mus. Comp. Zool., **64**, No. 4, p. 373, 1921—Perú; Mus. Comp. Zool.

A female from Puerto Bermúdez, March 8, 1923.

No material for comparison.

The specimen has been compared with the type by Dr. Hellmayr.

Lophotriccus pileatus pileatus (Tschudi).

E(uscarthmus) pileatus TSCHUDI, Arch. Naturg., **10**, (1), p. 273, 1844—Perú; Valley of Vitoc suggested by Hellmayr, 1927; Mus. Neuchâtel (lost?).

A male from Huachipa, September 21, 1922, and two males and two females (one female immature) from Chinchao, October 29–November 4.

Compared with seven specimens of *squamaecrista* from Las Lomitas, San Augustin, and Bogotá, Colombia, and Chimbo, Ecuador, and with five specimens of *luteiventris* from Costa Rica.

The specimens from Huachipa and Chinchao show the dark throats, the relatively greenish borders on the upper wing-coverts, and the dull, greenish yellow flanks of the typical race which was described from central Perú.

These curious little birds inhabited the depths of the forest and were difficult to secure owing to their secretiveness. Their note was

a peculiar "cree-ee-eek," weak and insect-like and very difficult to locate, while the birds themselves were so small and inconspicuous that they were lost in the shadows where they perched nearly motionless. I heard them many times but was not always successful in finding their exact position unless I made a particular search for them.

Pogonotriccus ophthalmicus Taczanowski.

Pogonotriccus ophthalmicus TACZANOWSKI, P. Z. S. London, 1874, p. 135—Amable Maria, Chanchamayo, Perú; type formerly in Warsaw Mus., now lost.

?Leptopogon godmani SCLATER, P. Z. S. London, 1887, p. 48—Sarayacu, e. Ecuador; British Mus.

?Pogonotriccus alleni OBERHOLSER, Proc. U. S. Nat. Mus., 25, p. 65, 1902—Río Cauca, Colombia; Amer. Mus. Nat. Hist.

Three males and two females from Huachipa, September 11–October 7, 1922.

Compared with a male and female from Gallera and El Roble, Colombia.

The Colombian birds seem to be a little brighter green above and brighter yellow below than my birds. Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 493, 1926) finds no differences in Colombian, Ecuadorian, and north-Peruvian (Chaupe) specimens. Berlepsch (in litt. to Dr. Hellmayr) found topotypical skins from Junín to be paler and less olivaceous below than more northern specimens, an observation which agrees with the differences apparently existing between the Huachipa and Colombian specimens at hand. Possibly *alleni* is separable from typical *ophthalmicus*, but in any case the Huachipa specimens appear to be referable to *ophthalmicus*. The paler belly probably indicates a transition toward *ottonis* which connects this form with *eximius* of northeastern Argentina (two skins examined). I suspect that all these are subspecies of one group, *eximius*, but lack the material to demonstrate it.

Phylloscartes ventralis angustirostris (D'Orbigny and Lafresnaye).

M(uscicapa) angustirostris D'ORBIGNY and LAFRESNAYE, Mag. Zool., **7**, cl. 2, p. 52, 1837—Yungas, Bolivia; Paris Mus.

Leptopogon tristis SCLATER and SALVIN, P. Z. S. London, 1876, p. 254—Simacu, Bolivia; British Mus.

Three males from Chinchao, October 28–November 19, 1922.

Compared with two males from Molinopampa, Perú, and three males and a female from Concepción, Tucumán, Argentina; also with six males and two females of *ventralis* from Therezopolis, Rio, Brazil; the Territory of Misiones, Argentina; and Quebrado de los Cuervos and from near Dolores, Uruguay.

The specimens from Perú and Tucumán, Argentina, differ from the others by having a slight grayish shade on the forehead but otherwise they are not distinguishable as a geographic unit. The Peruvian examples average about the same tone of green on the back as *ventralis;* the Tucumán specimens are somewhat lighter green. One Molinopampa skin is as light as the Tucumán examples but the other is the darkest of all. The subspecies *angustirostris* is very poorly distinguished.

Pseudocolopteryx acutipennis (Sclater and Salvin).

Hapalocercus acutipennis SCLATER and SALVIN, P. Z. S. London, 1873, p. 187—Bogotá, colombia; British Mus.

Two females from Huánuco, July 22, 1922.

Compared with a male and female from Maimara, Jujuy, northwestern Argentina.

The Peruvian birds are a little smaller than the Argentine specimens and probably are more typical of the species. Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 493, 1926) has noted that Ecuadorian and Colombian birds are smaller than Bolivian and Argentine examples.

Spizitornis parulus aequatorialis (Berlepsch and Taczanowski).

Anaeretes parulus aequatorialis BERLEPSCH and TACZANOWSKI, P. Z. S. London, 1884, p. 296—Cechce, w. Ecuador; ♀; Berlepsch coll., Frankfort Mus.

A male from La Quinua, May 14, 1922; a female from the mountains near Huánuco, 12,200 feet, June 30; and a female from Panao, July 15.

Compared with a male from Chical, western Ecuador, and a series of fifteen specimens of typical *parulus* from various parts of central and northern Chile.

The Peruvian birds agree well with the Ecuadorian specimen except that the latter is very slightly darker on the back.

Spizitornis flavirostris arequipae Chapman.

Spizitornis flavirostris arequipae CHAPMAN, Amer. Mus. Novit., **231**, p. 4, 1926—Arequipa, Perú; Amer. Mus. Nat. Hist.

A male and female from Matucana, May 1 and 4, 1922, and a male from Cullcui, Marañón River, December 15.

Compared with two males from Putre, Tacna, "Chile," now Peru.

The Cullcui specimen has the wing bands whiter than the others (they are tinged with vinaceous in the Matucana and Arequipa specimens) and the white tips on the outer rectrices are broader, but in all other respects it agrees with the remainder of the series. Possibly it may represent an undescribed form but with only one specimen from the locality at hand it would be unwise to attempt a separation. In various other species the upper Marañón form has proved to be the same as the coastal race. The series as a whole agrees well with Chapman's description of this race as separated from the Cuzco and Huancabamba subspecies, *cuzcoensis* and *huancabambae*, of which I have seen no specimens.

Spizitornis reguloides albiventris Chapman.

Spizitornis reguloides albiventris CHAPMAN, Amer. Mus. Novit., **118**, p. 7, 1924—Huaral, Prov. Lima, Perú; Amer. Mus. Nat. Hist.

Two males and a female from Matucana, April 29 and May 2, 1922; a male from Santa Eulalia, April 20.

Compared with three males from Macate; also with a male of *nigrocristatus* from Cajamarca, an unsexed bird from Tulpo, near Huamachuco, and a female, nearest to *nigrocristatus*, from above Huánuco (cf. *nigrocristatus*).

The Matucana and Santa Eulalia birds are virtual topotypes of this black-throated, short-crested race.

Spizitornis reguloides nigrocristatus (Taczanowski).

Anaeretes nigrocristatus TACZANOWSKI, Orn. Pér., **2**, p. 555, 1884—Chota, Cajamarca, Perú; type formerly in Warsaw Mus., now lost.

A female from the mountains near Huánuco, 10,500 feet, June 3, 1922.

Compared with a male from Cajamarca, a specimen of undetermined sex from Tulpo, near Huamachuco, and six males and a female of *albiventris* from Santa Eulalia, Matucana, and Macate.

The Huánuco bird is not typical *nigrocristatus* but is much closer to that form than to the coastal form, *albiventris*. The crest is long (20 mm. longest plumes) and black to the base, the throat is extensively whitish on the margins of the feathers, the flanks are less heavily streaked than in the Cajamarca specimen but more lightly

than in the series of *albiventris*, the outer rectrices have more extensive white than in *albiventris* though less than in the Cajamarca specimen of the present form, and the general size is between the two extremes (wing 55 mm.). It is possible that a series from central Perú would show the constancy of these intermediate characters but, on the other hand, it might show even closer approach to the Cajamarca subspecies from which there is not a great deal of difference exhibited in the specimens at hand. For the present it is best to refer the Huánuco bird to *nigrocristatus*.

Serpophaga cinerea cinerea (Tschudi).

L(eptopogon) cinereus TSCHUDI, Arch. Naturg., **10**, (1), p. 276, 1844—Perú = vicinity of Tarma; type in Mus. Neuchâtel.

Three males and a female from Huánuco, May 22–July 23, 1922.

Compared with a male from San Ramón, a male from Río Utcubamba, a female from Uchco, an unsexed immature specimen from Puente de Chimbo, Ecuador, and a female from Ecuador (collected by Buckley); also with four skins of *cana* from Salento, San José, and Bogotá, Colombia, and Mérida, Venezuela; and two males of *grisea* from Costa Rica and Panamá.

The Peruvian birds are typical of *cinerea*.

This little flycatcher frequented the rivers and was commonly found on the stones along the banks or above the surface of the water. Its note was a sharp "peep." It was called "Pushti" by some of the natives.

Mecocerculus leucophrys brunneomarginatus Chapman.

Mecocerculus setophagoides brunneomarginata CHAPMAN, Amer. Mus. Novit., **118**, p. 1, 1924—Cedrobamba, Urubamba Valley, Perú; Amer. Mus. Nat. Hist.

Two males and a female from above Huánuco, 10,500 and 12,200 feet, June 2–22, 1922.

Compared with nine skins of *leucophrys* from Concepción and Las Pavas, Tucumán, Argentina; also with seven skins of *setophagoides* from northeastern Colombia and western Venezuela, and two skins of *notatus* from near Popayan, Colombia.

I have not seen *rufomarginatus* from central Colombia, Ecuador, and northwestern Perú nor topotypical *brunneomarginatus* but, judging by descriptions, my specimens must be somewhat intermediate in characters as would be expected since the locality is intermediate.

Mecocerculus stictopterus taeniopterus Cabanis.

Mecocerculus taeniopterus CABANIS, Journ. Orn., **22**, p. 98, 1874—central Perú, Maraynioc; Berlin Mus.

Mecocerculus stictopterus aplastus OBERHOLSER, Proc. U. S. Nat. Mus., **25**, p. 63, 1902—Maraynioc; U. S. Nat. Mus.

Two males from the mountains near Huánuco, 10,500 feet, May 31 and June 15, 1922; a male and two females from above Panao, July 4 and 11.

Compared with a male from Molinopampa; also with four skins of *stictopterus* from Chical, Ecuador, and from Almaguer and near Popayan, Colombia.

The Peruvian series is separable from the Ecuadorian and Colombian birds by the paler head, greener (less brownish) back, whiter (less grayish) breast, brighter yellow crissum, and less buffy band on the outer margins of the inner remiges. The characters are not entirely constant, even in the small series at hand. The Molinopampa bird has the upper parts nearly as brown as in *stictopterus* and the breast about as gray; several Peruvian skins have distinctly isabelline margins on the inner remiges while the Popayan skin of *stictopterus* has little or no buffy tinge in the same region. In series, however, the races are quite separable though the Molinopampa bird evidently is intermediate.

Elaenia albiceps modesta Tschudi.

E(laenia) modesta TSCHUDI, Arch. Naturg., **10**, (1), p. 274, 1844—Perú = coast region, probably near Lima; Mus. Neuchâtel.

A male from Santa Eulalia, April 22, 1922; a male and two females from Chosica, April 14–16; three males and a female from Huánuco, 6,500 feet, May 24 and July 22–30; a male and three females from Vista Alegre, August 30–October 18; a male and three females from Huachipa, September 21–October 1; a male from Chinchao, October 23; and a male from Cullcui, Marañón River, December 16.

Compared with four males and six females from Moyobamba; also with a male of *griseogularis* from Chical, Ecuador, and the type and twenty-one additional specimens of *chilensis* from the provinces of Santiago, Malleco, Valdivia, Llanquihué, Cautin, and Chiloë, Chile; and with two skins from Santa Fé and Tucumán, Argentina, doubtfully referable to *chilensis*.

The Peruvian series is very puzzling. Two types of plumage are in evidence. One type shows a greener back, whiter crest, more

yellowish flanks and crissum, and very distinct wing bars and margins on the tertials; the other has a browner black, yellower crest, whiter flanks and crissum, and poorly defined wing bars and margins on the tertials. The specimens from Chosica and Santa Eulalia (which are topotypical) are of the second type. The Moyobamba birds are mostly of the first type, although three specimens are like the Chosica birds. The Huánuco, Huachipa, and Vista Alegre specimens are mostly dull-colored but several are brightly marked. The Cullcui bird is the largest, the Chinchao bird next in size, and the Chosica and Santa Eulalia males almost as large; the rest of the males are slightly smaller. Many of the specimens are in molt so that it is difficult to make an exact comparison among them, but there are freshly plumaged specimens in both series. The exact significance of this variation must await explanation until a larger series of specimens can be examined.

Elaenia gigas Sclater.

Elainea gigas SCLATER, P. Z. S. London, "1870," p. 831, 1871—Río Napo, Ecuador; British Mus.

A male from Vista Alegre, August 19, 1922, and a female from the Río Colorado, Chanchamayo Valley, February 1, 1923.

No material for comparison.

The female is more deeply colored than the male and without the white area on the lower belly, but it is immature, judging by the buffy wing bands and the pointed, buff-tipped rectrices.

The species was found in the gardens near the plantation buildings in both localities.

Elaenia chiriquensis albivertex Pelzeln.

Elainea albivertex PELZELN, Orn. Bras., 2, pp. 107, 177, 1868—Ypanemá, São Paulo, Brazil; Vienna Mus.

Elainea lundii REINHARDT, Vidensk. Medd. Naturhist. Foren., 1870, p. 344, pl. 8, fig. 1—Lagoa Santa, Minas Geraës, Brazil; Copenhagen Mus.

Elainea gracilis TACZANOWSKI, Orn. Pér., 2, p. 271, 1884—Chirimoto, Perú; Warsaw Mus.

Elaenia sororia BANGS, Proc. Biol. Soc. Wash., 12, p. 175, 1898—Palomina, Santa Marta, Colombia; Mus. Comp. Zool.

A male and young female from Vista Alegre, August 16 and October 12, 1922.

Compared with a female from Chachapoyas, Perú; two males and three females from the State of Maranhão, Brazil; two females

from Chapada, Matto Grosso; a male from Serra da Lua, Brazil; a female from Villa Rica, Paraguay; four males from Buena Vista, Santa Cruz, Bolivia; a Bogotá skin; a female from Río Chama, Venezuela; and seven males and three females from Maracay, Venezuela; also with two males and a female of *chiriquensis* from Colón, Panamá.

It is impossible to separate the Peruvian birds from the Brazilian series or to arrange the material at all satisfactorily. The Chachapoyas specimen is as yellow below as are the examples of *chiriquensis* and as pale on the breast, though the upper parts are grayer. The Vista Alegre male is paler below, matching some Maranhão examples. The Bolivian birds appear to have darker breasts than any others. The Maracay, Venezuelan specimens are hardly distinct from *chiriquensis* and the Bogotá bird agrees with them. I am not sure that *albivertex* is separable from *chiriquensis;* a large series from Central America should be compared with an equally large series of South American birds to be certain of the relationship.

Elaenia obscura obscura (D'Orbigny and Lafresnaye).

M(uscipeta) obscura D'ORBIGNY and LAFRESNAYE, Mag. Zool., 7, cl. 2, p. 48, 1837—Yungas, Bolivia; Paris Mus.

Muscipeta guillemini D'ORBIGNY, Voy. Amér. Mérid., Ois., p. 319, 1839—new name for *Muscipeta obscura* D'ORBIGNY and LAFRESNAYE.

Elainea rustica SCLATER, P. Z. S. London, 1861, p. 408—new name for "*Elainia obscura* TSCHUDI"; Brazil and Argentina.

A male from Chinchao, November 13, 1922.

Compared with a male from Molinopampa, Perú, two males and an unsexed bird from Bauru, São Paulo, a male from Victoria, São Paulo, and a male from Therezopolis, Rio, Brazil; also with six skins of *pudica* from Santa Elena and Páramo de Tamá, Colombia, and Escorial, Mérida, and Pinos, Venezuela.

The Peruvian birds appear to be indistinguishable from the Brazilian series, but the Chinchao specimen is badly worn and faded, and difficult to compare satisfactorily.

Elaenia pallatangae Sclater.

Elainea pallatangae SCLATER, P. Z. S. London, 1861, p. 407, pl. 41—Pallatanga, Ecuador; ♀; British Mus.

A male and female from the mountains near Huánuco, 10,500 feet, June 1 and 4, 1922; four males and a female from Panao,

July 15; a young female from Huachipa, September 24; and a female from Chinchao, November 2.

Compared with a female from Molinopampa, and five males and three females from Chunchi and Huigra, Ecuador (Acad. Nat. Sci. Philad.).

The Molinopampa bird is a trifle browner than most of the central Peruvian specimens but the difference is not constant. Peruvian and Ecuadorian specimens are inseparable.

This species inhabited the bushes and smaller trees on the open hillsides and along the roads in the temperate and subtropical zones. Huachipa (4,600 feet) probably represents the lower limit of vertical distribution; the locality is just at the boundary between tropical and subtropical zones.

Elaenia caniceps cinerea Pelzeln.

Elainea cinerea PELZELN, Orn. Bras., 2, pp. 108, 180, 1868—Marabitanas, Rio Negro, Brazil; Vienna Mus.

A female from Puerto Bermúdez, March 10, 1923.

Compared with two males and a female of *caniceps* from Rio de las Velhas, Codó (Cocos, Maranhão), and São Amaro, Brazil.

The bright yellow under parts of the Puerto Bermúdez female identify it as *cinerea*.

Phaeomyias murina wagae (Taczanowski).

Myiopatis Wagae TACZANOWSKI, Orn. Pér., 2, p. 253, 1884—Chirimoto, Perú; formerly Warsaw Mus., now lost; paratype in Berlepsch coll., Frankfort Mus.

A male from the Río Colorado, Chanchamayo Valley, January 28, 1923.

Compared with three males from San Ramón and three males and two females from Moyobamba; also with two skins of *inflava* from Trujillo and Menucucho, and a good series of *murina* and *incomta* from various parts of Brazil, British Guiana, Venezuela, and Colombia.

The east-Peruvian birds appear to be recognizably distinct by reason of larger bills and the more extensive and brighter yellow under parts. I have not seen *tumbezana* from the arid littoral of southwestern Ecuador and northwestern Perú.

Camptostoma obsoletum sclateri (Berlepsch and Taczanowski).

Eupsilostoma pusillum SCLATER (nec *Myopatis pusilla* CABANIS and HEINE), P. Z. S. London, 28, p. 68, 1860—Pallatanga, Ecuador; ♀; British Mus.

Ornithion sclateri BERLEPSCH and TACZANOWSKI, P. Z. S. London, 1883, p. 554—new name for *Eupsilostoma pusillum* SCLATER.

A male from Chosica, April 14, 1922; a male from Santa Eulalia, April 20.

Compared with two skins from Ecuador, seven from northern Perú, and small series of *obsoletum, cinerascens, napaeum,* and *pusillum* from various localities.

The Peruvian birds are closer to the Ecuadorian *sclateri* than to any other form but a few seem to be duller on the rump and to have less white about the eye. I have not seen enough Ecuadorian material to determine the constancy of this difference.

Phyllomyias griseiceps (Sclater and Salvin).

Tyranniscus griseiceps SCLATER and SALVIN, P. Z. S. London, for 1870, p. 841, 1871—Babahoyo, Ecuador; British Mus.

A male from the Río Colorado, Chanchamayo Valley, February 13, 1923.

No material for comparison.

An exact study of the Peruvian form of the species is impossible without more material. Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 501, 1926) records specimens from Perené which is across the Río Chanchamayo from the mouth of the Río Colorado.

Tyranniscus uropygialis (Lawrence).

Mecocerculus uropygialis LAWRENCE, Ann. Lyc. Nat. Hist. N. Y., **9**, p. 266, 1870—"Supposed to be Ecuador"; Amer. Mus. Nat. Hist.

A female from the mountains near Huánuco, 10,500 feet, June 1, 1922.

Compared with a male of *T. n. nigro-capillus* from Molinopampa, Perú, and two males and two females from the Mérida region of Venezuela.

The species, *uropygialis,* is very closely allied to *nigro-capillus* but there are certain supposed peculiarities of distribution which require explanation before the relationship can be determined precisely. The shape of the bill, the wing formula, and the pattern of coloration are exactly alike in the two groups, and the rufescent rump

of *uropygialis*, which is one of its characteristics, is suggested in some of the Mérida specimens of *nigro-capillus*. A large series from all parts of the ranges of both groups will be necessary to settle the problems of relationship.

Tyranniscus viridiflavus viridiflavus (Tschudi).

E(laenia) viridiflava TSCHUDI, Arch. Naturg., **10**, (1), p. 274, 1844—Perú; Mus. Neuchâtel.

Tyranniscus frontalis BERLEPSCH and STOLZMANN, Ibis, 1894, p. 390—Garita del Sol, Vitoc, Perú; Warsaw Mus.

Four males and three females from Vista Alegre, August 18–October 18, 1922.

Compared with three males and two females of *chrysops* from La Sierra and Fusugasugá, Colombia; Colón, Tachira, Venezuela; and Poco Tambo, Perú.

The Vista Alegre birds are separable from the more northern specimens but I can see no reason for keeping them specifically distinct. The only constant difference appears to be in the intensity of the yellow coloration on the under parts. The specimen from Poco Tambo effectively bridges the difference in the color of the crown, having the top of the head as dark as in *viridiflava* though otherwise it is like *chrysops*. Two *chrysops* from La Sierra, Colombia, and the bird from Venezuela have the lores as pale yellow as in *viridiflavus*, being quite different in that respect from the other Colombian specimen. The size and structural details are about the same in the two forms and there is no confusion in geographical distribution.

Oreotriccus plumbeiceps (Lawrence).

Pogonotriccus plumbeiceps LAWRENCE, Ann. Lyc. Nat. Hist. N. Y., **9**, p. 267, 1869—Bogotá; U. S. Nat. Mus.

A male and female from Huachipa, September 11 and 18, 1922.

No material for comparison.

The superficial resemblance between this species and *Pogonotriccus ophthalmicus* is very striking. Both have the same pattern of coloration, differing in very slight particulars, but the blunter shape of the bill and the absence of the heavy rictal bristles distinguish the present species very clearly.

Leptopogon superciliaris superciliaris Tschudi.

L(eptopogon) superciliaris TSCHUDI, Arch. Naturg., **10**, (1), p. 275, 1844—Perú; montaña of Vitoc suggested by Hellmayr, 1927; Mus. Neuchâtel.

Two males from Vista Alegre, August 30 and 31, 1922; four males and three females from Huachipa, September 11–October 1.

Compared with a female from Rioja.

There is considerable individual variation in the color of the wing bars but in all the specimens at hand there is more or less tawny buff present, sometimes very slightly indicated, sometimes intense.

Mionectes olivaceus fasciaticollis Chapman.

Mionectes olivaceus fasciaticollis CHAPMAN, Amer. Mus. Novit., **67**, p. 9, 1923—Tulumayo, Perú; ♀; Amer. Mus. Nat. Hist.

Three males and two females from Huachipa, September 29–October 4, 1922; a male from Chinchao, November 14.

Compared with six specimens of *venezuelensis* from Venezuela, two *olivaceus* from Costa Rica, and two *hederaceus* from western Colombia and western Ecuador.

The Peruvian birds are distinct from the other forms examined but I am not sure how distinct they may be from *pallidus* of eastern Colombia which I have not seen. Two of my specimens have the crown noticeably darker than the back. The throat in all the specimens is about as in *hederaceus* though the breast is more broadly streaked, in most cases, with clearer whitish. In these respects they agree with the description of *pallidus*. However, the belly is not paler than in *hederaceus* but about the same tint, and in most of the skins the head is about the color of the back; these may prove to be the most stable characters for the recognition of the present race.

One of the Huachipa males and the San Ramón male do not have the second primary deeply emarginated as in the three other males but otherwise do not appear to be immature.

Mionectes striaticollis poliocephalus Tschudi.

M(ionectes) poliocephalus TSCHUDI, Arch. Naturg., **10**, (1), p. 275, 1844—Perú; Valley of Vitoc suggested by Hellmayr, 1927; Mus. Neuchâtel.

A male from Vista Alegre, August 21, 1922; a female from Chinchao, November 20.

Compared with a male of *columbianus* from La Candela, Colombia.

Both Peruvian birds show the characters of *poliocephalus*, although the female (which is not fully adult) is less clearly marked than the male. The latter appears to be adult but lacks the attenua-

tion of the second primary which is supposed to characterize the adult males of this species. Both examples have noticeable streaks on the breast. The male has these marks very fine on a dark green ground; the young female has the ground paler (grayer) with the streaks distinctly broader, though not as heavy as in *columbianus*, and there is less green on the back of the head. The presence of the streaks on the chest may indicate an approach toward the characters of *striaticollis* of Bolivia.

Orochelidon murina (Cassin).

Petrochelidon murina CASSIN, Proc. Acad. Nat. Sci. Philad., **6**, p. 370, 1853—Ecuador; Acad. Nat. Sci. Philad.

Atticora cyanophaea CABANIS, Journ. Orn., **9**, p. 92, 1861—Santa Fé de Bogotá, Colombia; Berlin Mus.

A female from the mountains near Huánuco, 12,200 feet, June 21, 1922.

Compared with a female from near Leimabamba, Perú, and a female from Puente Andalucia, Colombia.

The two Peruvian birds are distinctly more greenish above than the Colombian bird, but the difference evidently is individual since Hellmayr (Archiv. Naturg., **85**, (10), A, p. 10, 1920) noted that Ecuadorian birds were greener than specimens from Ollachea, Perú, and Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 556, 1926) found no differences of racial value in specimens from Colombia, Ecuador, and Perú.

Pygochelidon cyanoleuca (Vieillot).

Hirundo cyanoleuca VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., **14**, p. 509, 1817—based on AZARA'S "Golondrina de la timoneles negros"; Paraguay.

A female and a young male and female from Huánuco, July 23, 1922; a young male from Huachipa, October 1.

Compared with a series of skins from Moyobamba and Hacienda Llagueda, Perú; Concepción, Tucumán, Argentina; Bogotá, San Antonio, and Caldas, Colombia; Puente de Chimbo, Ecuador; Parotani, Bolivia; Therezopolis and Rio de las Velhas, Brazil; and Macuto, Venezuela.

There is no racial difference apparent in the series.

Pygochelidon patagonica peruviana Chapman.

Pygochelidon patagonica peruviana CHAPMAN, Amer. Mus. Novit., **30**, p. 7, 1922—Huaral, Province of Lima, Perú; Amer. Mus. Nat. Hist.

Two males from Matucana and Santa Eulalia, May 1 and April 22, 1922.

Compared with a series of *patagonica* from Concepción, Tucumán, Argentina, and Baños del Toro, Papudo, and Lake Gualletue, Chile; also with a female from San Ramón and a young female from Yurimaguas, Perú, which I refer to *patagonicus*.

The Matucana and Santa Eulalia birds are small and have the white of the under tail-coverts practically absent, being reduced to a small whitish, but not white, area at the very base of the short coverts. The San Ramón and Yurimaguas specimens (May 26 and September 24) I take to be winter birds from the south; the Yurimaguas specimen is in full (pre-nuptial) molt.

Stelgidopteryx ruficollis ruficollis (Vieillot).

Hirundo ruficollis VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., **14**, p. 523, 1817—Brazil = Rio de Janeiro; Paris Mus.

A male from Río Colorado, Chanchamayo Valley, February 1, 1923.

Compared with specimens from Moyobamba, Rioja, and San Ramón, Perú, and with examples from São Marcello (Bahia), Piraputanga (Matto Grosso), and Tranqueira (Maranhão), Brazil.

The Peruvian series appears to be inseparable from the Brazilian birds. The Río Colorado specimen is distinctly darker than any of the others, being blacker on wings and tail, more dusky on the back and head, darker brown on the flanks, and deeper rufescent on the throat than the rest, including a female from San Ramón, very near to the Río Colorado. The specimen, however, is just completing its molt and the plumage is very fresh, which may account for the unusually heavy coloration.

Cyanocorax violaceus Du Bus.

Cyanocorax violaceus DU BUS, Bull. Acad. Roy. Belg., **14**, pt. 2, p. 103, 1847—Perú; Brussels Mus.

Two females, Puerto Bermúdez, March 14, 1923.

Compared with a specimen from "Bogotá."

One bird lacks the whitish band on the upper hind neck, having the whole area uniform bright Aniline Lilac; the other has the white line well marked.

The species occurred in small flocks and was not common. It was seen only at Puerto Bermúdez.

Xanthoura yncas yncas (Boddaert).

Corvus yncas BODDAERT, Tabl. Pl. Enl., p. 38, 1783—based on DAUBENTON, Pl. Enl. 625; Perú.

(*Corvus*) *peruvianus* GMELIN, Syst. Nat., 1, p. 373, 1788—based on DAUBENTON, Pl. Enl. 625; Perú.

(*Pica*) *chloronota* WAGLER, Syst. Av., genus *Pica*, sp. 12, 1827—Perú; "Collect. Ryals at Leadbeater, Londin."

?Pica luteola LESSON, Traité d'Orn., p. 331, 1831—"patrie?"

One female from Chinchao, October 31, 1922.

Compared with a series of skins from Hacienda Limón, Molinopampa, and Uchco, northern Perú.

The Chinchao specimen agrees well with the average of the more northern series. It has the occiput and nape rather noticeably tinged with pale blue, more pronouncedly than in some of the others but much less than in a female from Molinopampa which has the same region broadly tipped with Light Squill Blue (through which the rich creamy bases of the feathers are visible only anteriorly). The blue on the anterior part of the head of this Molinopampa bird is Light Cadet Blue, noticeably paler than the Diva Blue x Gentian Blue of the normal adult.

This species was not common in the regions visited and the bird obtained was the only one seen. It had a loud, hoarse call-note, "wawk, wawk, wawk," not greatly unlike that of *Paradisaea raggiana*. It appears to inhabit the humid subtropical zone. The local residents gave it the name of "Quien-quien."

Cyanolyca viridi-cyana jolyaea (Bonaparte).

Cyanocitta Jolyaea BONAPARTE, Tageblatt 29 Versamml. Deutscher Naturforscher und Aerzte, Wiesbaden, (Beilage), p. 89, Sept. 25, 1852—"Amer. m." (=Peru on label of type); I suggest Molinopampa, n. Perú; Paris Mus.

Four males and one female from near Panao, 10,300 feet, July 6–16, 1922.

Compared with four females and one male from Molinopampa; also with two specimens of *viridi-cyana* labeled as collected by Ockenden at Quispicanchis, Marcapata, Perú.

The series of *jolyaea* is fairly consistent. My four males are all deeply colored and one of the Molinopampa females is nearly as strongly marked as the most extreme Panao example. The Panao female is noticeably lighter and greener but not so much so as another

of the Molinopampa females. The Molinopampa male is lighter and greener than my males, about like my female.

Dr. Hellmayr has kindly compared my female and darkest male with Bonaparte's type in the Paris Museum and finds that the type is somewhat intermediate between these two in the color of the throat but like the Panao female in the color of the remaining under parts, and nearer to the male in respect to the upper parts. The type is labeled as from Perú and doubtless came from somewhere in the northern part of the country, for which reason I suggest Molinopampa as an appropriate type locality, in the absence of more definite knowledge as to the exact source of Bonaparte's bird.

It is doubtful if the two specimens of *viridi-cyana* at hand actually came from the Marcapata district of Perú. Hellmayr's *cyanolaema* was described from Chuhuasi with another example present from Huasampilla whence Sclater later described his synonymous *cuzcoensis*. Both these localities are in the same general region as Marcapata and it is extremely unlikely that *viridi-cyana* also occurs there. The labels have very meager data, quite unlike Ockenden's usually careful handiwork. No exact date beyond the year 1905 and no elevation, sex, colors of soft parts, or other information is given. Since the specimens evidently are from those secured on Ockenden's last, ill-fated expedition, it is probable that he did not collect them himself nor supply the data and they may have been purchased locally with original source unknown. The known Marcapata form, *cyanolaema*, is an exact intermediate between *viridi-cyana* and *jolyaea*.

The original reference to Bonaparte's description appears never to have been quoted. Cabanis received a copy of the reprinted article and reprinted it a second time in the Journal für Ornithologie, **1**, pp. 46, 47, 1852. I discovered a copy of the first reprint in the Edward E. Ayer Ornithological Library of Field Museum and published an account and photographic reproduction of it in the Catalogue of the Ayer Library (Field Mus. Nat. Hist. Publ., Zool. Ser., **16**, p. 70, pls. 3, 4, 1926). More recently I have come upon the original publication in which the paper appeared.

The society of the *Deutscher Naturforscher und Aerzte* has been in existence for many years, holding its meetings annually in one town after another and issuing a variety of publications depending, apparently, on the resources of the particular meetings. In 1852 the twenty-ninth meeting was held in Wiesbaden from September 18 to 24. The publication that year consisted of a *Tageblatt*, issued each day of the meeting and giving the day's program with a review of

the minutes of the preceding day. The series is numbered consecutively from 1 to 7. On the 25th of September a *Beilage zu Nr. 7 d. Tageblatts* was published with the minutes of the meeting of the 24th, this being paged continuously with the preceding leaflets.

The *Tageblatt* for September 23 (p. 58) announces Bonaparte as on the program for the day. That for the 24th (p. 74) mentions his name among those taking part on the previous day. The *Beilage*, published on the 25th, includes a *Nachtrag zu der Verhandlungen der Sectionen am 23. September* which contains Bonaparte's original paper in full, exactly as reprinted except that it occupies parts of two pages, 88 and 89, being divided at the end of the table of "Aves." The descriptions of the three new species (*Thalassidroma tethys*, *Chelidoptera albipennis*, and *Cyanocitta Jolyaea*) are all on page 89.

That this leaflet was actually published as stated on September 25 is supported by the fact that Bonaparte mailed at least one copy of the reprint from Frankfort on the following day, that being the copy sent to Du Bus and now in Field Museum of Natural History.

Heleodytes fasciatus fasciatus (Swainson).

Furnarius fasciatus SWAINSON, Anim. in Menag., p. 351, 1838—Perú = n. Perú; W. Hooker coll., now in Cambridge (Eng.) Mus.

Eight males and three females from Huánuco, May 24–July 30, 1922.

Compared with five males and a female from Huancabamba (Mus. Comp. Zool.), a male and female from Menucucho, and five females from Hacienda Llagueda, Hacienda Limón, Trujillo, and Macate; also with four males and two females of *pallescens* from Daule and Santa Rosa, Ecuador (Amer. Mus. Nat. Hist.), a male and female from Sullana, Perú (Mus. Comp. Zool.), and a specimen from Milagro, Ecuador.

The Huánuco birds are larger and darker than the north-Peruvian skins of *fasciatus* but since most of my specimens are in molt it is difficult to say with precision what the differences may be in their entirety. I prefer, therefore, to refer them to *fasciatus* until a more satisfactory series is available for study.

The Banded Wren was a most interesting, if mischievous, denizen of the thickets in the vicinity of Huánuco. Its bulky nests were common objects in the trees throughout the valley, constructed of grass, fibers of other plants, cotton, and a few small sticks. The nests seemed to be kept in repair although none that I found were

used for incubation purposes, and I was informed that some of the structures were used for roosting places and others were built as a blind to distract attention from the genuine nest. They were about the size of a football and with a side entrance. To obtain the cotton, which forms a large portion of the building material when available, the birds are said to rob the cotton fields to the great disgust of the native planters. They also stole many of the tufts of cotton which I had twisted around convenient twigs to mark the location of my traps for small mammals, and it was some time before I discovered the thieves.

The birds have the curious habit of singing in pairs. Sometimes one will pick up the song as the other stops and keep the rhythm continuous; sometimes both sing together or with interspersed notes, making a jumbled chorus. The syllables are not always the same. The most common ones were "yu-we-a-weé, yu-we-a-weé," or "cha-weé-a-wuh, cha-weé-a-wuh, ..." The local names for the wren, based on its vocal performance, are "Taurugarái" and "Café-con-leche."

Odontorchilus branickii branickii (Taczanowski and Berlepsch).

Odontorhynchus branickii TACZANOWSKI and BERLEPSCH, P. Z. S. London, 1885, p. 72, pl. 7, fig. 1—Machay, Ecuador; Warsaw Mus.

A male and female from Huachipa, September 11 and 18, 1922.

Compared with two males, a female, and an unsexed bird from Machu Picchu, Utcuyacu, and Uchco, Perú (Amer. Mus. Nat. Hist.); also with a male of "*minor*" from La Palma, Colombia (Amer. Mus. Nat. Hist.).

The Huachipa birds are in worn plumage agreeing in that, as in other respects, with an Utcuyacu male. The Machu Picchu and Uchco skins are in fresh plumage and in comparison with the Colombian skin of "*minor*," also fresh, are a little darker in coloration than this northern bird. The Machu Picchu male and the Colombian male are of the same size (wing 62 mm.), the Huachipa male is but little smaller (wing 61 mm.), and the type of *branickii*, according to the authors, was very little less (wing 60 mm.). In view of this it seems very probable that *minor* (which was described as having a wing of 53 mm. in the male sex) was based on a wrongly sexed female and is therefore inseparable on the basis of size. The apparent differences of coloration, in turn, are slight and need to be confirmed by larger series from Colombia.

Thryophilus leucotis peruanus Hellmayr.

Thryophilus leucotis peruanus HELLMAYR, Anz. Orn. Ges. Bayern, 5, p. 41, 1921—Nauta, Río Marañón, Perú; Frankfort Mus.

A male from Puerto Bermúdez, March 8, 1923.

Compared with ten skins of *albipectus* from Brazil, British Guiana, and Caura, Venezuela; twelve of *venezuelanus* from Catatumbo, Orope, Encontrados, Guayabo, and La Uraca, Venezuela; seven *bogotensis* from Bogotá and El Guayabal, Colombia, and Valera, Venezuela; and a Bogotá skin of *leucotis*.

In dorsal coloration the Peruvian specimen is dull and dark and resembles certain examples of *albipectus* from near Bôa Vista, Brazil, but it is darker on the top of the head and much more rufescent below; the whole breast and belly are deep Pinkish Buff (to light Tawny Olive), the flanks are Snuff Brown, and the under tail-coverts are Sayal Brown.

Sphenura coraya amazonica (Sharpe).

Thryothorus amazonicus SHARPE, Cat. B. Brit. Mus., 6, p. 235, pl. 15, fig. 1, 1881—Sarayacu, e. Perú; British Mus.

?Thryothorus albiventris TACZANOWSKI, P. Z. S. London, 1882, p. 5—Chirimoto, Perú; formerly Warsaw Mus., now lost.

Two males from Vista Alegre, August 21, 1922; one from Chinchao, November 13.

Compared with four specimens of *cantator* from the Chanchamayo district (three in Amer. Mus. Nat. Hist.), and an adult male and two immature specimens of "*albiventris*" from Moyobamba.

Owing to the comparative rarity of Peruvian examples of this group I am unable to fix the identity of my birds without question. Apparently they are not referable to *cantator* from the Chanchamayo Valley. The four examples of that form at hand agree with Taczanowski's description in the matter of rufous and black bars on the tail and the rufous under tail-coverts, uniform or barred with dusky, whereas my specimens have the tail and the under tail-coverts grayish (Hair Brown) barred with black. Judging from descriptions, the Vista Alegre and Chinchao birds are closest to *amazonicus* though I have no topotypical specimens of the latter for comparison.

The Moyobamba specimens appear to represent *albiventris*. The adult has the whole mid line of the under parts white, with the flanks buffy brown and the sides of the breast gray, the crown overlaid

with Hair Brown, and the back light in color (about Hazel x Tawny). The young birds are duller above and rather broadly ochraceous buff below. The tail and under tail-coverts of both adult and young are barred with gray, not rufous.

Berlepsch (Journ. Orn., **37**, p. 293, 1889) records a specimen of *amazonicus* from Yurimaguas, not very distant from Moyobamba, and in his unpublished notes he describes a young male from Sarayacu in comparison with the Yurimaguas specimen, concluding that the two are not specifically separable. The differences he mentions as distinguishing the Sarayacu bird and the Yurimaguas specimen are the same as separate my Vista Alegre and Chinchao birds from the Moyobamba adult, except that my two specimens are darker above as well as duller than the Moyobamba skin.

None of the known specimens of *albiventris* and *amazonicus* agree exactly with any of the others. Sharpe had a single specimen of *amazonicus;* Taczanowski had one of *albiventris;* Berlepsch had two skins from two localities; my two specimens do not agree in detail. The series of *cantator* exhibits great variation among the various specimens and it is certain that the northern form or forms must do the same. For the present, therefore, it appears best to recognize but one race from north-central and northeastern Perú and await more material before attempting to distinguish additional races of what is at best a very variable species.

The generic name *Pheugopedius* is antedated by *Sphenura* Lichtenstein (Verz. Vögel Mus. Berol., pp. 7, 8, May, 1822—type, by monotypy, *S. coraya;* cf. Mathews, Birds Australia, **10**, p. 149, 1923). If the genus is not worthy of recognition, the oldest name is *Thryothorus*.

Troglodytes musculus albicans Berlepsch and Taczanowski.

Troglodytes furvus albicans BERLEPSCH and TACZANOWSKI, P. Z. S. London, 1883, p. 540—Guayaquil, Ecuador; Frankfort Mus.?

Two males from Chinchao, one male from Vista Alegre, and one male from Huachipa, August 28–November 14, 1922.

Compared with a series from Chachapoyas, Moyobamba, Yurimaguas, and Uchco, Perú; Puente de Chimbo, Ecuador; and various localities in Brazil, Venezuela, and British Guiana.

These specimens are rather puzzling in affinities but seem to belong to the widely distributed form, *albicans*. None of the four specimens have the whitish median under parts of typical *albicans*,

the vinaceous tone of *audax*, nor the rich coloration of *puna*, but they are somewhere in the midst of all three.

The series at hand furnishes evidence of sufficient variation in *albicans* to cover the differences in ventral coloration shown by my four specimens. Especially do the examples from farther north in Perú exhibit transitional differences. Adult Moyobamba and Yurimaguas birds are well-marked *albicans;* Chachapoyas birds are most like my own examples; one Uchco skin is intermediate and one other is typical *albicans*. Some of the specimens from Maranhão, eastern Brazil, show a lack of white below, so it seems unlikely that much significance is attached to this variation.

There is some resemblance to the coastal form, *audax*, in the Chachapoyas skins, but the lack of vinaceous tinge in the Huachipa, Vista Alegre, and Chinchao specimens removes these last-named examples still farther from the littoral race. On the back and crown, all four skins are somewhat deeper brown than any other of the *albicans* series and strongly suggest *puna*. One Chinchao bird has the rump dark, though little more rufescent than the back; the other Chinchao specimen has the rump distinctly brighter; the Huachipa example has rump and upper tail-coverts as rich rufescent as some examples of *puna*.

On the whole, the subtropical valley of the upper Huallaga seems to be occupied by a transitional form which connects *albicans* and *puna;* higher up in the same valley, *puna* appears to be established.

Troglodytes musculus audax Tschudi.

Troglodytes audax TSCHUDI, Faun. Per., Aves, p. 185, 1846—coast of Perú; Mus. Neuchâtel.

One male and one female from Vitarte, April 26, 1922; two males from Santa Eulalia, April 22 and 23; two males from Matucana, April 30 and May 4.

Compared with five males from Hacienda Limón, Hacienda Llagueda, and Macate, northern coast of Perú; also with a male and a female of *carabayae* from San Ramón.

The present specimens are presumably topotypical of *audax*, especially the Vitarte birds. They agree among themselves and with the specimens from farther up the coast. In general the dorsal surface is unbarred, but there are very faint traces of fine barring in all of the skins. The male of *carabayae* from San Ramón is exactly similar in this respect but is noticeably grayer and darker above,

with much duller rump and upper tail-coverts; the female is similarly dark but is strongly barred above.

Troglodytes musculus puna Berlepsch and Stolzmann.

Troglodytes musculus puna BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 329—Ingapirca, Perú; Warsaw Mus.

A male and female from La Quinua, May 8, 1922; four males, one female, and one specimen of undetermined sex from the mountains near Huánuco, 10,500–12,200 feet, June 2–30; one female from Panao, July 8; two males from Huánuco Viejo, December 24.

Compared with a male from near Balsas and one from near Molinopampa, Perú.

All but the Huánuco Viejo birds are clearly referable to this richly colored highland race. The Huánuco Viejo specimens are quite pale and ochraceous in coloration, with less vinaceous and more buffy tone even than *albicans*. They are in rather worn plumage but are comparable to October and November examples of *albicans* from Chinchao to which they do not bear particular resemblance. A June specimen from the mountains near Huánuco is somewhat paler than the average of *puna* and may represent the fresh condition of the coloration exhibited by the Huánuco Viejo specimens.

None of my series of *puna* is very large. Wing measurements of the males vary between 52 and 55 mm.; tail 42 to 48½ mm. The males of *albicans* from northern Peru (cf. account of *albicans*) have wing measurements of 50–56 mm.; tail 39–46 mm. Ecuadorian examples are a little smaller. Males of *audax* at hand have the wing varying between 51 and 55 mm.; tail between 39½ and 42 mm. Evidently size is of minor value in distinguishing these races in Perú, although *puna* sometimes reaches a maximum of 61 mm., wing, and 52 mm., tail (cf. Chapman and Griscom, Bull. Amer. Mus. Nat. Hist., **50**, p. 303, 1924), which is beyond the maximum of any of the other subspecies.

Henicorhina leucosticta hauxwelli Chubb.

Henicorhina leucosticta hauxwelli CHUBB, Bull. Brit. Orn. Club, **40**, p. 156, 1920—Elvira, n. e. Perú; British Mus.

Two adult males, one young male, and two adult females from Huachipa, September 3–October 5, 1922.

Compared with one male, two females, and one bird of dubious sex from Florencia and La Murelia, Colombia; also with a male of

leucosticta from Carimang River, British Guiana (Amer. Mus. Nat. Hist.).

The Peruvian specimens agree with Chubb's short description of *hauxwelli* fairly well except that they are deeper and redder than *leucosticta* but not especially darker. The Colombian examples are essentially the same but are smaller than the Peruvian birds.

The young male from Huachipa is very similar to a young male of *H. leucophrys leucophrys* from Vista Alegre but has shorter legs, a more whitish tone on the throat and breast, less buffy under wing-coverts, a little narrower black band on the upper auriculars, and deeper rufous flanks and back, and has the characteristic white spots on the alula which are lacking in *leucophrys*.

One of the males from Huachipa has the bill curiously twisted and malformed. Another has the brown of the fore part of the mantle continued broadly across the center of the hind neck to the occiput and thence across the center of the crown and forehead as narrow brown tips on the feathers, showing an approach to some of the characters of *H. l. prostheleuca*.

Curiously enough, I found no *leucophrys* at Huachipa nor did I find *hauxwelli* at Vista Alegre, although these two localities are just across the narrow Chinchao River from each other. However, from Huachipa the tropical forest extends northward down the Huallaga Valley while from Vista Alegre the hills rise into the subtropical zone, so, although the river can not possibly form an effective barrier to keep these species apart, the tendency may be for each to keep very precisely within its own zonal limits.

Henicorhina leucophrys leucophrys (Tschudi).

Tr(oglodytes) leucophrys TSCHUDI, Arch. Naturg., **10**, (1), p. 282, 1844—Perú; Mus. Neuchâtel.

Two females and one young male from Vista Alegre, September 1–October 16, 1922; a female from Chinchao, November 5.

Compared with a male and female from Uchco, a female from Molinopampa, and eleven skins from Bogotá, Andalucia, and Subía, eastern Colombia, and Páramo de Tamá, Colombia and Venezuela.

The series shows considerable agreement and considerable variation and it is difficult to distinguish any separable units in it. Tschudi's original description specifies a bird with blackish edges to the feathers of the throat. This character is noticeable in all but the Vista Alegre and Chinchao birds, being especially prominent in the series from Páramo de Tamá and the male from Uchco, Perú (which

is more like the Páramo de Tamá specimens in this and other respects than it is like the female from Uchco). I do not know the exact locality whence Tschudi secured his specimens of the species. He notes it as occurring in northeastern Perú in the "Urwald" but the farthest north that he reached in that kind of country was the Chanchamayo Valley. Of all the specimens at hand, that from Uchco answers best to the original description. Without a large series from various parts of Perú it is impossible to differentiate between the individual and possible racial variations or to suggest a restriction of Tschudi's name to the birds from any particular section of the country.

I found the species about the bushes and undergrowth on the hillsides. Its alarm call was something like "heé-oop, heé-oop, heé-oop," uttered when the bird was disturbed but while it was mostly concealed. I never found it in full song, although its performance has been eulogized by various early travelers. Once only, at Chinchao, I heard a short but remarkably sweet and musical song whose author could not be approached very closely along the treacherous hillside and I was unable to identify it. I was told by a Peruvian that it was the famous "Organista." The name was well applied since there was a certain organ-like quality of tone which gave the song a peculiar richness.

Mimus longicaudatus longicaudatus Tschudi.

M(imus) longicaudatus TSCHUDI, Arch. Naturg., **10**, (1), p. 280, 1844—Perú; Mus. Neuchâtel.

Mimus peruvianus PEALE in WILKES, U. S. Expl. Exped., **8**, p. 87, 1848—Callao, Perú; U. S. Nat. Mus.

Mimus leucospilus PELZELN, Sitzb. Akad. Wien, **31**, p. 324, 1858—"Chile," errore = Perú; Vienna Mus.

Mimus nigriloris LAWRENCE, Ann. Lyc. Nat. Hist. N. Y., **10**, p. 137, 1871—"Mexico," errore = Perú; Amer. Mus. Nat. Hist.

A female from Chosica, April 15, 1922.

Compared with four males from Menucucho, Perú.

The Menucucho specimens are badly worn (February and March) and the Chosica bird is in full molt but the combined series seems to represent but a single form of which the Chosica example is probably nearly topotypical.

It is probable that this form is a representative of *M. thenca* of Chile, of which I have examined a series of thirteen skins, but I

prefer to keep them specifically distinct until I have seen more Peruvian material, since there are certain characters that seem to be constantly different in the two groups.

I found this mockingbird sparingly in the thickets along the hillsides above the Rimac River, but it was shy and elusive and usually gave me but a flash of white-tipped tail as it disappeared into hiding.

Myiadestes ralloides ralloides (D'Orbigny).

Muscipeta ralloides D'ORBIGNY, Voy. Amér. Mérid., Ois., p. 322, 1839—Chulumani, Bolivia; Paris Mus.

Pt(ilogonys) griseiventer TSCHUDI, Arch. Naturg., **10**, (1), p. 270, 1844—Perú; Mus. Neuchâtel.

An immature female from Chinchao, November 17, 1922.

Compared with two adults of *venezuelensis* from Colombia.

Without adult specimens from Chinchao or near-by localities, it is impossible to fix the identity of this immature bird or to determine the validity of Tschudi's *griseiventer*, which does not appear to have been recognized in recent years as distinct from *ralloides*.

Turdus fuscater gigantodes Cabanis.

Turdus gigantodes CABANIS, Journ. Orn., **21**, p. 315, 1873—Maraynioc, Perú; ♀; Berlin Mus.?

Three males and two females from the mountains near Huánuco, 10,500 feet, June 1–16, 1922; an immature male from Cullcui, Marañón River, December 10.

Compared with twenty-one additional skins from Macate, Balsas, Hacienda Llagueda, Hacienda Limón, Molinopampa, and Chachapoyas, northern Perú, and from Chical, Cochaseca, and Hoyaucshi, Ecuador; also with two skins of *quindio* from Santa Isabel and Paramillo, Colombia.

The Peruvian and Ecuadorian series seems to be indivisible although several of the Ecuadorian birds show an approach toward *quindio*.

These large thrushes were common in the temperate zone above Huánuco in company with *Turdus chiguanco*, from which they were distinguishable in the field chiefly by their larger size and darker coloration.

Turdus ignobilis debilis Hellmayr.

Turdus ignobilis debilis HELLMAYR, Journ. Orn., **50**, p. 56, 1902—Rio Madeira, Brazil; Vienna Mus.

A male and a female from Vista Alegre, October 17, 1922.

Compared with six examples from Moyobamba, Lagunas, and Yurimaguas, northern Perú.

The Vista Alegre skins are a trifle darker and grayer on the back and breast but hardly separable from the more northern birds. The present race is the only one recorded from Perú.

The species was noted only among the scattered trees of the more or less open hillsides adjacent to the humid tropical forest but not within the forest itself. As it was not found at higher elevations in similar country it seems to be referable to the tropical zone fauna.

Turdus chiguanco chiguanco D'Orbigny.

Turdus chiguanco D'ORBIGNY, Voy. Amér. Mérid., Ois., p. 201, 1836—near Tacna, 2,000 m. up to Palca; Paris Mus.

Turdus conradi SALVADORI and FESTA, Boll. Mus. Torino, **14**, No. 367, p. 4, 1899—Sigsig, Ecuador; Turin Mus.

Two males, an adult female, and an immature female from Matucana, April 29–May 2, 1922; a male from La Quinua, May 16; two males from above Huánuco, 6,500–10,500 feet, August 4 and June 10; a male from Huánuco Viejo, December 22; a male from Cullcui, Marañón River, December 15; a female from Chinchao, November 8.

Compared with twenty-five other skins from Perú (Moquegua, Cocachacra, Macate, Hacienda Llagueda, Cajamarca, Río Utcubamba, and Chachapoyas) and four from Ecuador (Chimborazo, El Paso, and Loja) (eight skins in Amer. Mus. Nat. Hist.).

Three males and a female from Moquegua and Cocachacra should represent typical *chiguanco*. They are paler with more pure white on the lower belly and crissum than most of the central and north-Peruvian birds, but they are nearly matched, except in size, by the Cullcui and Huánuco Viejo specimens and even more closely by several Ecuadorian examples representing *conradi*. The skins from the other localities show considerable variation in both size and color without regard to distribution.

D'Orbigny (Voy. Amér. Mérid., Ois., pp. 201, 202, Oct., 1838) notes the occurrence of his *chiguanco* from sea level up to Palca which is at an elevation of 2,740 meters, as high as Matucana where I took a large dark specimen. Higher in the mountains south of Tacna, at Putre, C. C. Sanborn secured a specimen which is also large and is the darkest and grayest of the series before me, probably

representing an approach toward *anthracinus*. Berlepsch (MS.) notes a female from Ica, with wing 131 mm. and tail 113½ mm., which he describes as gray, less brownish than Huira examples. If a specimen from the moderate elevation of Ica agrees with north-central Peruvian birds, the assignment of Moquegua and Tacna examples to a different lowland race, distinct from *conradi*, seems problematical. If such a race is maintained, most of my Peruvian birds will be unidentifiable.

These birds are very like the American Robin in actions and not radically unlike it in song though recognizably distinct.

Hylocichla ustulata swainsoni (Tschudi).

Merula Wilsonii SWAINSON (nec *Turdus wilsoni* BONAPARTE) in SWAINSON and RICHARDSON, Faun. Bor.-Amer., 2, p. 182, Febr., 1832—Carlton House (on the banks of the Saskatchewan), lat. 53°; type in coll.?

T(urdus) swainsoni TSCHUDI, Faun. Per., Aves, p. 28, 1845—new name for *Merula Wilsonii* SWAINSON (a specimen collected by Cabanis in New Jersey is only incidentally described on page 188, 1846).

Two females from Chinchao, October 26 and 31, 1922.

Compared with a series from North America.

These birds were found in a small patch of second-growth trees on the mountain side, in conditions rather humid than arid. They were silent and shy. Both are referable to the eastern race, *swainsoni*.

Anthus bogotensis immaculatus Cory.

Anthus bogotensis immaculatus CORY, Field Mus. Nat. Hist. Publ., Orn. Ser., 1, p. 345, 1916—mountains east of Balsas, Perú; Field Mus. Nat. Hist.

Two males from the mountains above Huánuco, 12,200–12,500 feet, June 12 and 21, 1912.

Compared with the type of *immaculatus* and a specimen of *bogotensis* from Páramo de Tamá, Venezuela, both males.

The characters given in the original description of *immaculatus* do not hold completely for all three skins at hand from Perú, since both Huánuco birds have well-marked flank streaks (perhaps not quite so broad as in *bogotensis*); even the type has traces of shaft lines on the lower flanks. Above, the dusky centers of the feathers are a very little narrower than in the Venezuelan skin, and the pale margins are a little brighter buff and a trifle wider, but the differences are so slight as to appear unlikely to hold in a large series. However,

additional characters not mentioned by Cory appear to be present in more sharply defined pale inner margins of the remiges and in dusky inner margins of the outermost rectrices, which likewise may not hold in a series.

It is possible that *Anthus rufescens* D'Orbigny and Lafresnaye (nec Temminck, 1820), Mag. Zool., 7, cl. 2, p. 27, 1837, from the Yungas of La Paz, Bolivia, belongs here, though it was described as having longitudinal streaks on the flanks. I have no Bolivian material.

Anthus furcatus brevirostris Taczanowski.

Anthus brevirostris TACZANOWSKI, P. Z. S. London, 1874, p. 507—Junín, Perú; Warsaw Mus.

Two females from Huánuco Viejo, December 21, 1922.

Compared with four males from Puno, Perú, two males of *furcatus* from Argentina (Las Rosas, Santa Fé, and Torrecito, Buenos Aires), and a series of thirty-one skins from Concepción, Tucumán, Argentina.

It is with difficulty that I can recognize in this material the form *brevirostris* which Taczanowski later synonymized with *furcatus* and which Hellmayr (Hornero, 2, p. 182, 1921) revived. Peruvian birds may have a slightly more rufescent tone on the rump than typical *furcatus* and they seem to have a little more white on the two outer pairs of rectrices, though the latter character is not constant. The specimens from Concepción, Tucumán, are equivocal and while most of them show the black and white markings of the tail as in *furcatus*, the color of the rump varies between that of *furcatus* and that of *brevirostris*. The color of the breast and belly and the shape of the bill seem to have no significance.

This pipit was found only on the high plains where, in December, it occurred in vagrant flocks.

Vireosylva virescens chivi (Vieillot).

Sylvia chivi VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., **11**, p. 174, 1817—based on AZARA; Paraguay.

A female from Vista Alegre, August 25, 1922; a male and female from Huachipa, September 19 and 24.

Compared with a male from Paraguay; nine males and two females from Misiones, Argentina; a male and two skins of doubtful sex from Matto Grosso, Brazil; a male and female from Bolivia; and a male from San Ramón and two females from Hacienda Limón,

Perú; also with twenty-five skins of *agilis* from the states of Bahia, Maranhão, Piauhy, Amazonas, and Ceará, Brazil; four males and a female of *vividior* from Trinidad, British Guiana, and Lake Valencia, Venezuela; two Bogotá skins of *caucae;* and a large series of *virescens* from North America.

The Peruvian birds are not typical of *chivi* but, together with the Bolivian and Matto Grosso specimens, are duller above and below than the Paraguayan and Argentine examples. However, the latter are mostly in better plumage than the Peruvian birds and the apparent differences may not be sustained by a larger series of the latter in more comparable condition, which I would like to see before describing the variations in detail.

I do not believe that *chivi* and *virescens* can be maintained as distinct species. The supposed differences in the length of the first primary in relation to the fourth and fifth primaries (from outside) are bridged by individual variation. Although I have seen no *chivi* subspecies with the first primary as long as the fourth and no *virescens* with the first shorter than the fifth, there are specimens at hand of both groups in which the first and fifth are subequal. Pattern and general coloration show no specific differences.

Vireosylva leucophrys leucophrys (Lafresnaye).

Hylophilus leucophrys LAFRESNAYE, Rev. Zool., 1844, p. 81—Colombia; Mus. Comp. Zool.

A male from Chinchao, November 6, 1922.

Compared with two skins from Colombia and one from the Río Chama, near Mérida, Venezuela.

The Chinchao bird is inseparable from the northern specimens which appear to be typical *leucophrys*. The species is badly in need of revision by someone with an abundance of material.

Vireolanius leucotis subsp.?

Malaconotus leucotis SWAINSON, Anim. in Menag., p. 341, 1838—"Africa," errore = Guiana?

One male from Huachipa, September 21, 1922.

Compared with a specimen from the lower Huallaga River (U. S. Nat. Mus.).

The correct determination of the Huachipa specimen must await a revision of the entire species for which the material is not available. The skin agrees with the descriptions of both *mikettae* (w. Ecuador)

and *simplex* (Rio Tapajoz), as does a skin from Perené, judging by Chapman's account (Bull. Amer. Mus. Nat. Hist., **55**, p. 590, 1926). The example from the lower Huallaga appears to be closest to typical *leucotis*, having considerable white on the sides of the head, though whether as a mid-auricular stripe or as a white tip on the superciliaries it is difficult to say owing to the very poor condition of the specimen. Chapman (l. c.) records two birds from eastern Ecuador, one of which is said to have a white auricular streak that is practically absent in the other; my Huachipa bird has only a faint suggestion of grayish white at the lowest point of the yellow subocular spot. *V. bolivianus* from Bolivia and the Marcapata District of southeastern Perú is said to have the forehead distinctly blackish which is not the case in the Huachipa bird.

It thus appears that my specimen is most closely allied to *simplex* (which I have not seen) although the nearest locality from which that form is recorded is northern Matto Grosso. In view of these puzzling facts I must let the problem await further study.

The specimen was taken from a vagabond troop of mixed species in the dense tropical forest.

Cyclarhis gujanensis saturatus Zimmer.

Cyclarhis gujanensis saturatus ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., **12**, p. 107, 1925—Cullcui, Marañón R., Perú; Field Mus. Nat. Hist.

One male (the type) and two females (one immature) from Cullcui, Marañón River, December 11 and 13, 1922.

Compared with eleven specimens of *gujanensis, contrerasi* and *virenticeps* as specified in the original description.

These birds were found in the bushes along the steep hillsides bordering an affluent of the Marañón, in conditions more arid than humid subtropical. They preferred to keep in concealment rather than to expose themselves at the edges of the thickets.

Coereba luteola chloropyga (Cabanis).

C(erthiola) chloropyga CABANIS, Mus. Hein., **1**, p. 97, 1851—Bahia; Halberstadt Mus.

Three males and two females from Chinchao, October 23–November 14, 1922; two males and two females from Vista Alegre, August 30 and 31 and October 16; one male and one female from Huachipa, September 28 and October 3; and one male from Hacienda Buena Vista, Río Chinchao (E. Heller, collector), September 15.

Compared with fifteen specimens from Bahia, Ceará, Minas Geraës, Pará, and Maranhão, Brazil, and Santa Cruz, Bolivia; also with seven specimens of *magnirostris* from Bellavista, Huancabamba, Perico, and Cajamarca, Perú (Mus. Comp. Zool. and Field Mus. Nat. Hist.); and with four examples of *intermedia* from Moyobamba, four of *alleni* from Matto Grosso, five of *columbiana* from Colombia, two of *guianensis* from British Guiana, and four of *minima* from eastern Brazil.

The Expedition series is not satisfactorily separable from the Brazilian specimens of *chloropyga*. Together with the Bolivian skin they show minute average differences in the blacker (less brownish) head, grayer or more olivaceous (less brownish) back, and greener (less ochreous) yellow rump, but the characters are very slight. Some specimens in each series are indistinguishable from each other. The two series seem to be segregated by the interposition of *alleni* in Matto Grosso so that subspecific distinction would be very plausible, but I am unable to find sufficient characters on which to propose such a separation.

A slight indication of transition toward *intermedia* (of n. Perú and e. Ecuador) is found in several of my specimens in which the grayish margins of the primaries are slightly widened and more whitish than usual, but the same tendency is noticeable in some of the east-Brazilian birds.

The species was common, usually in flocks, about the trees and shrubs in flower on the hillsides and at the edge of the forest in the tropical and subtropical zones.

Diglossa sittoides decorata nom. nov.

Diglossa sittoides intermedia CORY (nec *D. intermedia* CABANIS, 1851), Field Mus. Nat. Hist. Publ., Orn. Ser., **1**, No. 7, p. 292, 1913—Cajamarca, Perú; Field Mus. Nat. Hist.

An adult male, two immature males, and a female from Chinchao, October 30–November 6, 1922, and an immature male from Huachipa, September 28.

Compared with the type of Cory's *intermedia*, from Cajamarca, and with four males and a female from the Urubamba Valley (U. S. Nat. Mus.); also with ten examples, mostly males, of *d'orbignyi*[1]

[1] Boissonneau's name, *d'orbignyi*, should, I think, be applied to the Bogotá form often known as *similis*. Boissonneau gave the measurements of his species as 12 cm. total length and 8 cm. for the bill, which Chapman (Bull. Amer. Mus. Nat. Hist., **37**, p. 580, 1917) thinks are too large to apply to this race of *sittoides*. However, I have seen skins from Venezuela which measure 11.8 cm. as made up

from Colombia and Venezuela (four in Carnegie Mus.) and four specimens of *sittoides* from Bolivia (two in U. S. Nat. Mus. and two in Amer. Mus. Nat. Hist.).

The name *intermedia* is preoccupied by Cabanis's earlier usage, which necessitates renaming the Peruvian race or dropping the supposed subspecies. If the sole criterion were the type specimen, it perhaps would be better to submerge the name entirely. The type is much paler below than any other Peruvian specimen I have seen but it is in abraded plumage and has the appearance of being faded and abnormal. Hellmayr (MS.) has noted specimens from Cajabamba, Succho, and Santiago, northern Perú, which are considerably more deeply colored than the type, and Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 637, 1926), while referring certain Ecuadorian specimens to *intermedia*, states that their color is much like typical *sittoides* from Bolivia.

However, there are certain characters found in Peruvian specimens which may entitle them to continued separation from *sittoides*. They are slightly smaller than that form (wing of males, 56–59 mm. instead of 61–68 mm.), being about the size of *d'orbignyi*, and are a trifle paler below than either of the others. The forehead and anterior part of the crown are usually conspicuously lighter and brighter than the back, whereas in *sittoides* the area is about uniform with the back and in *d'orbignyi* somewhat darker. The two innermost tertials have on their outer webs a conspicuous, broad, buffy white or buff spot occupying about one-third the length of the feather. This is bleached to nearly white in the type and largely worn off but it is still recognizable as having been of the same character. The spot is sometimes suggested in the adjacent forms but in most cases these have the tertials edged only with gray like the secondaries, perhaps with a little white or buffy white near the tip, never as pronounced as in the Peruvian birds.

Specimens from the Urubamba region are larger than those from central and northern Perú, thus approaching *sittoides*, but they retain the bright forehead and the spots on the tertials of the central Peruvian examples. With these characters thus apparently fixed as the real racial criteria (instead of the abnormally pallid under parts of the type), I believe the subspecies may still be maintained under the new name *decorata*.

and a stretched skin could easily exceed Boissonneau's measurement; the length of the bill as given is actually less than in the skins I have handled of this form. The description fits the female of this bird fairly closely and much better than it does any other member of the genus.

These birds were found in small flocks in the open woods and at the edges of the clearings, and in trees along the roadsides in the subtropical and upper tropical zones. They were extremely active and very warbler-like in behavior.

Diglossa carbonaria brunneiventris Lafresnaye.

Diglossa brunneiventris LAFRESNAYE, Rev. Zool., 1846, p. 318—Perú; Paris Mus.?

One male and one female from La Quinua, May 9, 1922; six males and three females from the mountains near Huánuco, 10,500–12,200 feet, May 31–June 16; one male from Panao, July 15; one male and one female from Cullcui, Marañón River, December 13 and 16.

Compared with nine examples from Balsas, Limbani (Carabaya), Ollantaytambo, and Torontoy, Perú, and Paramillo, Colombia (Amer. Mus. Nat. Hist. and Field Mus. Nat. Hist.).

The series is somewhat variable in coloration without respect to locality. The tone of rufous on the belly is found in various hues, sometimes with fine grayish margins on the abdominal feathers; the amount of gray on the flanks and upper tail-coverts is not constant; the rufous malar stripe is sometimes incomplete, not reaching the bill; the development of a grayish superciliary stripe is irregular; several specimens show broad grayish tips on the lower margin of the black gular patch, not apparent in the others. Evidently this race, which I consider the most ancient member of the species, is subject to the greatest amount of variation, which may account for its having produced such widely differentiated forms as *aterrima* and *carbonaria*. This I have discussed in greater detail elsewhere (Auk, **46**, p. 28, 1929).

Des Murs (Iconog. Ornith., Lief. 8, p. 43, text, 1847) says that the type of *brunneiventris* was collected in Chile by Gay and presented to the Paris Museum, but Gay makes no mention of it in his work on the natural history of Chile. Hellmayr (Arch. Naturg., **85**, A, (10), p. 11, 1920) suggests that the type may have come from Bolivia.

These birds were common inhabitants of the woods in the temperate zone, both in the deeper portions and at the edges of the clearings. They were noted commonly associated with the other members of the mixed vagabond flocks.

A curious fact, noted first in the present species but found afterwards in every member of the genus collected, was that most of the

subcutaneous layers of fat were quite stiff, of the consistency of cream cheese, and but little oily, and could be lifted with the forceps and peeled freely from the skin.

Diglossa lafresnayii pectoralis Cabanis.

Diglossa pectoralis CABANIS, Journ. Orn., **21**, p. 318, 1873—Maraynioc, Perú; Berlin Mus.

One male and two females from above Huánuco, 12,200 and 12,500 feet, June 12–28, 1922.

Compared with two specimens of *unicincta*, three of *albilinea*, the type of *mystacalis*, seven skins of *lafresnayii*, and eight of *gloriosissima*, all of which I consider to be races of *lafresnayii*.

The characters and relationships of this interesting bird have been discussed in detail in a former paper (Auk, **46**, pp. 21–37, 1929).

The specimens were taken in the dense mossy forest of the cloud belt, in the pockets at the heads of the ravines. The birds were not common.

Diglossa cyanea melanopis Tschudi.

D(iglossa) melanopis TSCHUDI, Arch. Naturg., **10**, (1), p. 294, 1844—Perú; Berlin Mus.

Diglossa personatus TSCHUDI (nec *Agrilorhinus personatus* Fraser), Faun. Per., Aves, p. 237, 1846—part, N. (=C.) Perú.

Four males and two females from the mountains near Panao, July 3 and 4, 1922.

Compared with a male and female from Molinopampa, a male from Uchco, and thirteen skins of typical *cyanea* from Ecuador, Colombia, and Venezuela.

The Peruvian birds are consistently larger than the Colombian and Venezuelan skins and, with one exception, are larger also than the Ecuadorian specimens. They are also darker and duller blue, except for the crown which is lighter. The under tail-coverts are less strongly tipped with white than in *cyanea*, but are not entirely without white as is said to be the case in Bolivian examples.

Tschudi's type locality, "N. Peru," must mean some region no farther north than Cerro de Pasco, the point farthest in that direction reached by Tschudi in his travels through Perú.

Resurrection of the name *cyanea* for this species is necessary since it has distinct priority over Fraser's *personatus*. Fraser's paper was read before the Zoological Society of London on February 25, 1840,

but it was not published in the Proceedings of that society until July of the same year, whereas Lafresnaye's independent description was published in the Revue Zoologique in April. Gray (Gen. Birds, 1, p. 137, 1846) properly uses the name *cyanea* while Sclater (P. Z. S. London, 1855, p. 138) gives preference to Fraser's name by citing the date on which it was read, meanwhile accepting the date of Lafresnaye's paper as April 1.

If the genus *Diglossopis* is to be recognized, this species must be referred to it (cf. account of *D. caerulescens pallida*).

These birds were found in small flocks in the woodland of the temperate zone.

Diglossa caerulescens pallida (Berlepsch and Stolzmann).

Diglossopis caerulescens pallida BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 334—"Peruvia alta centrali et septentrionali" = Garita del Sol; Warsaw Mus.

Three males and one female from Chinchao, November 2–20, 1922.

Compared with a small series of *saturata* from Colombia and western Venezuela.

The Peruvian birds differ from *saturata* by their larger size, grayer blue upper parts, much paler (more ashy and less bluish) under parts, and slightly straighter, less recurved, culmen. There is an apparent break in the distribution of the species, since no form has been recorded from Ecuador. Sclater's inclusion of that country in his distributional synopsis (Cat. Birds Brit. Mus., **11**, p. 12, 1886) is evidently a mistake since he records no specimens from Ecuador and stated somewhat earlier (Ibis, 1875, p. 221) that he had seen none from the country in question. Recent observers have not been any more fortunate.

I have included this species in the genus *Diglossa* owing to inability to recognize a clearly defined and separable genus *Diglossopis*. The hook of the bill is but little less pronounced in this species than in *Diglossa cyanea*, the culmen is variably recurved in the different races, the relative lengths of the exposed culmen and the lateral outline of the mandible are alike in the two species mentioned, and the outline of the gonys is the same. Between *D. major* and the extremes of individual variation in *cyanea* there is little difference in the characters mentioned and they are carried only a step farther in the *lafresnayii* group. Any separation of these four species from each other on the basis of characters found in the shape of the bill would

be purely arbitrary since there is a gradual transition from the straighter, less hooked bill of *caerulescens* to the recurved and strongly hooked bill of *lafresnayii*. Whatever disposition may be made of the genus *Diglossopis*, therefore, these four species would have to go together.

On the other hand, *lafresnayii* is distinguishable from various other members of the genus *Diglossa* only by characters which appear to be of no more than specific value. Consequently it seems best to recognize only the single genus which, without subdivision, is compact and distinct but which, if divided at all, will require to be broken up into a number of poorly defined genera, none of which will be perfectly isolated.

The specimens secured by the Expedition were found in the humid temperate forest in company with other birds high in the trees.

Conirostrum sitticolor cyaneum Taczanowski.

Conirostrum cyaneum TACZANOWSKI, P. Z. S. London, 1874, p. 512—Sillapata, Perú; type formerly in Warsaw Mus., now lost.

One male and two females (one adult and one young) from above Panao, July 5 and 10, 1922.

Compared with two males from Balsas and Molinopampa; also with a male of *intermedium* from the Mérida region, Venezuela, and three skins of *sitticolor* from Bogotá.

The Panao birds agree well with the description of *cyaneum* although both adults have the upper throat dull blackish, which, apparently, is not the case in typical *cyaneum*. The Balsas male has this blackish coloration deeper and more extended while the Molinopampa specimen has the whole throat and chest, except the narrow lower border of the latter, rich glossy black. These two examples show a decided approach toward *sitticolor* of Colombia in this respect and also by having the superciliary stripes short and terminated anteriorly at the posterior corner of the orbits, whereas in the Panao specimens the stripes extend past the middle of the orbits. The Balsas and Molinopampa skins show some resemblance to *intermedium* from Venezuela, although that race is smaller and has the superciliaries as long as in typical *cyaneum;* thus they stand at a point in the midst of the three races, showing some characteristics of all of them.

Conirostrum cinereum littorale Berlepsch and Stolzmann.

Conirostrum cinereum littorale BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 336—Lima, Perú; Warsaw Mus.

A male from Matucana, May 2, 1922; a male from La Quinua, May 15; a young male from Huánuco, 12,200 feet, June 19; a male and two females from Cullcui, Marañón River, December 11–16.

Compared with seven males and two females from Pica, Tarapacá, Chile; a male from Chacalluta, Tacna, a female from Cajamarca, and a female from Macate, Perú.

There is considerable variation in size, with the smallest measurements found in the Matucana specimen, which agrees in that respect with other specimens from the coastal region of Perú and northern Chile. The Cullcui skins exceed the wing measurements of *cinereum* as given by Hellmayr (Arch. Naturg., **85**, A, (10), p. 13, 1920), but lack the strongly marked dusky cap and grayish breast of the typical race, although both characters are suggested in some of the series.

Conirostrum ferrugineiventre Sclater.

Conirostrum ferrugineiventre SCLATER, P. Z. S. London, **23**, p. 74, pl. 85, 1855—Bolivia; Derby Mus., Liverpool.

A female from the mountains near Huánuco, 12,200 feet, June 18, 1922.

No material for comparison.

This bird agrees well with Sclater's original description and with the more detailed one given by Taczanowski (Orn. Pér., **1**, p. 424, 1884), being nearer to the measurements of the type than to Taczanowski's male.

The present locality extends the known range of the species somewhat to the northward, since it has been recorded only from Maraynioc, Torontoy, and Ccachupata in Perú and from various localities in Bolivia.

The nearest relative of this bird seems to be *Conirostrum rufum*.

Dacnis lineata (Gmelin).

M(otacilla) lineata GMELIN, Syst. Nat., **1**, (2), p. 990, 1789—Cayenne; based on "pitpit a coiffe bleue" of BUFFON.

Dacnis angelica BONAPARTE, Atti Sesta Riun. Sc. Ital., p. 404, 1845—Brazil.

Dacnis melanotis STRICKLAND, Contr. Orn., 1851, p. 16—Cayenne and Demerara.

D(acnis) arcangelica BONAPARTE, Bull. Soc. Linn. Normandie, Caen, **2**, p. 31, 1857—Bogotá.

Dacnis modesta CABANIS, Journ. Orn., **21**, p. 64, 1873—Monterico, Perú; ♀; Warsaw Mus.

Two adult males, one young male, and one female from Vista Alegre, August 24--October 15, 1922, and three young females from the Río Colorado, Chanchamayo Valley, January 31–February 7, 1923.

Compared with fifty-one other specimens (in Field Mus. Nat. Hist., Amer. Mus. Nat. Hist., and Acad. Nat. Sci. Philad.) from Nuevo Loreto and Moyobamba, Perú; Río Napo, Zamora, San José, Río Suno, Macas region, and Río Upano, Ecuador; Cuembi, Bogotá and La Murelia, Colombia; Tamanoir, Pied Saut, and Cayenne, French Guiana; Nova Olinda, Caviana, Pará, Falls of the Rio Madeira, Panda Rapids (Rio Teodoro), and Tonantins, Brazil; and Mapiri, Bolivia.

Throughout this series I am unable satisfactorily to separate any recognizable subspecies. The greenest example is one from the Napo, Ecuador; the deepest blue is one from Vista Alegre; the rest vary between these extremes without any regularity. Peruvian birds may average a little larger, but the distinction is of doubtful value. The tone of blue is extremely variable according to the angle of incidence of the light so that comparisons are sometimes difficult except under most favorable conditions. In any case, enough specimens from the various regions can be matched with each other to make any separation purely arbitrary.

I see no reason for rejecting Gmelin's name *lineata*. The forehead, sides of the head and neck, and the mantle of this species are, in certain lights, a distinct though very dark violet blue, which agrees with Buffon's account of a "cape d'un beau bleu brillant et fonce"; the remainder of his description also agrees with the species. Latham translated Buffon's description verbatim, but Gmelin attempted to abbreviate it and mixed the two types of blue into a confused account; probably he had never seen a specimen. His reference to Buffon and Latham serves to identify the species to which he applied the first valid name.

Cyanerpes caerulea microrhyncha (Berlepsch).

Coereba caerulea microrhyncha BERLEPSCH, Journ. Orn., 1884, p. 287—Bucaramanga, Colombia; coll. Berlepsch, in Frankfort Mus.

An adult female from Vista Alegre, October 15, 1922, and a young male from Puerto Bermúdez, March 10, 1923.

Compared with a small series from Moyobamba, Perú; "Bogotá," Colombia; and Buenavista, Bolivia; also with specimens of *chocoana*

from Río San Juan, Colombia, *caerulea* from Utinga, Brazil, and the three Guianas, and *longirostris* from Trinidad.

Within the series of *microrhyncha* there is a little variation which may have some racial significance, but the material at hand is not sufficient to settle the matter definitely. A Bolivian female differs from Peruvian females by reason of duller green upper parts; brownish ear-coverts without a greenish suffusion, except on the lower border in continuation of the blue malar stripe; and the breast and flanks without a trace of blue in the grass green margins of the feathers, which here are sharply defined from the white shaft stripes. The Peruvian females all have decidedly greenish auriculars and usually prominently bluish margins on the feathers of the breast and flanks, while the general tone of coloration above is brighter than grass green. The young male from Puerto Bermúdez is like the Bolivian female in respect to the brownish auriculars and lack of blue on the breast, but the general tone of coloration is a little brighter than that of the Bolivian bird. One of the Moyobamba females is less bluish on the breast than the others but in most respects resembles them. The Bogotá females have no green on the auriculars, which are colored like the throat, and the breast is less distinctly marked with bluish than in the Peruvian examples, but the tone of green is the same and brighter than in the Bolivian bird.

However, before suggesting the separation of a Peruvian race, I would like to see much more material, including a series of males from various localities; all but one of the present series are females.

Parula pitiayumi alarum (Chapman).

Compsothlypis pitiayumi alarum CHAPMAN, Amer. Mus. Novit., **143**, p. 2, 1924—Chaupe, e. of Huancabamba, Perú; Amer. Mus. Nat. Hist.

One adult male, one supposed male, also adult, and one young male from Chinchao, October 28 and November 7, 1922.

Compared with two skins of *melanogenys* from Santa Ana and Garita del Sol, Perú; fifteen skins of *pitiayumi* from Uruguay, Argentina, and southeastern Brazil; and nineteen skins of *elegans* from Venezuela, British and Dutch Guiana, and Colombia.

These specimens seem to agree better with the description of *alarum* than with that of *melanogenys*, especially in the length of wing, although they are intermediate in coloration. The wing bar on the greater coverts is as large as in many specimens of *elegans*

but that on the middle coverts is much reduced, being represented by a fine, more or less obsolete, white terminal point, an ashy blue subterminal area, and an irregular central shaft spot of white. Both adults have the wing 60 mm. in length. The general coloration is not appreciably different from that of *elegans* except that the black loral spot is duller and extends less below the eye. The young bird is colored like the adults except that the remiges and rectrices are somewhat brownish, with their outer margins duller blue, slightly tinged with greenish.

If the International Rules of Zoological Nomenclature are to be followed with their recommendations, it is necessary to revert to the name *Parula* for this genus, since an earlier *Parulus* does not preoccupy *Parula*.

Dendroica cerulea (Wilson).

Sylvia cerulea WILSON, Amer. Orn., 2, p. 141, pl. 17, fig. 5, 1810—Pennsylvania.

A female and two young males from Huachipa, September 30–October 3, 1922; a female and a nearly adult male from the Río Colorado, Chanchamayo Valley, February 4–16, 1923.

Compared with North American specimens.

The Río Colorado male still retains the greenish primaries and secondaries, the pointed rectrices, and the yellowish-tinged rump of immaturity, but otherwise it has acquired adult dress.

The February birds were noted as giving their characteristic song; the September and October birds were not singing.

Wilsonia canadensis (Linnaeus).

(*Muscicapa*) *canadensis* LINNAEUS, Syst. Nat., ed. 12, 1, p. 327, 1766—based on BRISSON'S *Muscicapa canadensis cinerea;* Canada.

A male and female from Huachipa, October 1 and 4, 1922; a female from Vista Alegre, October 13; a male and two females from Chinchao, October 29–November 14.

Compared with North American examples.

In its winter quarters, the Canada Warbler has the same general habits that it shows in its northern travels. At Huachipa it was found in the depths of the forest; at the other localities it was in open woods.

Myioborus verticalis verticalis (D'Orbigny and Lafresnaye).

S(etophaga) verticalis D'ORBIGNY and LAFRESNAYE, Mag. Zool., 7, cl. 2, p. 50, 1837—Ayupaya, Bolivia; Paris Mus.

A male and a female from Huachipa, September 11 and 12, 1922. Compared with a male from Bolivia, and a male and two females from Hacienda Limón, near Balsas, Perú; also with a series of *pallidiventris* from Colombia and Venezuela.

The Peruvian and Bolivian birds for the most part show less black at the base of the outer rectrices than *pallidiventris;* one of the Hacienda Limón females has the same amount (20 mm.) as a Venezuelan female on the outer rectrix, decidedly less on the second. The bird with the least amount of black is the Huachipa female; the next is the Bolivian male. A larger series from northern Perú might show that the average was closer to *pallidiventris* than to *verticalis* but with the material at hand the relationship appears to be closer to the typical subspecies.

The depth of color on the breast and belly is variable in both races. The Peruvian specimens average as pale as any of the Venezuelan skins, while the Bolivian bird has a distinct spot of brownish color on the upper breast as in some of the Colombian examples. The Hacienda Limón male has the feathers of the throat broadly tipped with yellow; the same character is suggested in a female from that locality and in the Huachipa female.

Myioborus melanocephalus melanocephalus (Tschudi).

S(etophaga) melanocephala TSCHUDI, Arch. Naturg., **10**, (1), p. 276, 1844—Perú; Mus. Neuchâtel.

An adult male and female and a juvenal male from the mountains near Huánuco, 10,500 feet, June 3–15, 1922; two males and two females from Panao, July 5–8.

Compared with three skins from Molinopampa, Perú.

The Huánuco and Panao specimens show some variation in the tone of yellow on the face and under parts, ranging from near Cadmium Yellow to near Lemon Chrome. One male from Panao has the yellow eye ring complete, although it is continued over the lower anterior portion only by the tiny feathers of the eyelid. The eye ring is connected with the yellow throat by a broad vertical band between the lores and auriculars which is more or less finely tipped with black. In the Molinopampa specimens this vertical band is absent or but faintly indicated, and the black of the lores is not separated distinctly from that of the auriculars but unites with it to form a broad stripe that rather completely interrupts the yellow eye ring. Berlepsch (MS.) notes the variability of this

character in Bolivian specimens, so that an extensive series will be necessary to determine its relative constancy in north-Peruvian birds. The Molinopampa specimens show also a greater posterior extension of the black cap, an absence of pale shaft lines at the base of the auriculars, and less black on the outer margins of the second outer rectrices, but the value of these characters also is in doubt.

One of the Molinopampa birds shows traces of rufous margins on the bases of the central occipital feathers, pointing to relationship with *M. bairdi* which Taczanowski (Orn. Pér., **1**, p. 480, 1884; ex Stolzmann) says has identical habits with *melanocephalus* that occurs at Chota and Cutervo but is replaced by *melanocephalus* at Chachapoyas. It seems probable that *bairdi* may prove to be a race of the present species; the ranges of the two seem to be separated by the Marañón River in northwestern Perú, a natural barrier.

A young male in fluffy plumage is washed with brownish above; the cap is darker and more dusky than in the adults; the lores are a little blacker; the sides of the head are like the back, with a few fine, yellow points below the eye; the throat is dull Mustard Yellow; the belly is Naples Yellow x Straw Yellow; the breast is distinctly rufescent (Tawny Olive) with dusky tips; the tail is as in the adult.

Basileuterus tristriatus tristriatus (Tschudi).

M(yiodioctes) tristriatus TSCHUDI, Arch. Naturg., **10**, (1), p. 283, 1844—Perú, probably near Vitoc; Mus. Neuchâtel.

Two males and a female from Chinchao, November 12 and 20, 1922.

No Peruvian material for comparison.

Todd (Proc. U. S. Nat. Mus., **74**, pp. 58 and 59, 1929) has compared these specimens with twenty-four other examples from Perú and southern Ecuador and finds that they are noticeably duller below than the rest of the series, with a close resemblance to *baezae* of eastern Ecuador, though with whiter upper throat. Since typical *tristriatus* apparently occurs both north and south of Chinchao, it is better to consider the differences mentioned as due to extreme individual variation than to attempt the separation of a new race with a circumscribed range, at least until a larger amount of material is available.

This species inhabited the thickets of light second-growth on the hillsides near the upper limits of the humid subtropical zone.

Basileuterus coronatus coronatus (Tschudi).

M(yiodioctes) coronatus TSCHUDI, Arch. Naturg., **10**, (1), p. 283, 1844—Perú (=Chanchamayo Valley, TSCHUDI, Faun. Per., Aves, p. 193, 1846); Mus. Neuchâtel.

A female from Chinchao, November 20, 1922.

No material for comparison.

The specimen has been compared with the type by Dr. Hellmayr and found to agree. It also agrees well with the characters of the restricted subspecies as defined by Todd (Proc. U. S. Nat. Mus., **74**, art. 7, 1929), who examined this specimen and referred it to the typical race.

The bird was taken from among the bushes and ferns surrounding a spring on the steep hillside above Chinchao. It was rather shy.

Basileuterus nigro-cristatus nigrivertex Salvin.

Basileuterus nigrivertex SALVIN, Novit. Zool., **2**, p. 3, 1895—Cajabamba, Suecha, and Huamachuco, n. Perú; British Mus.

Three males from Cullcui, Marañón River, December 10 and 12, 1922.

Compared with a small series of *nigro-cristatus* from "Bogotá" and El Pinon, Colombia, and Páramo de Tamá, Hechisera, and Escorial, Venezuela.

The Peruvian series is separable from the typical race by fairly well marked characters. The color of the back is very slightly brighter and more yellowish green than the average of *nigro-cristatus* although it is matched by a Bogotá skin. The flanks are less deeply tinged with olive and the thighs are more yellowish, less greenish. The bill is more blackish than in some of the typical race but is matched by several specimens from the north. The tone of yellow on the under parts is not consistently different in the two series. The black cap of the Peruvian birds is short, not passing the occiput; in the Venezuelan skins (two males and a female) the feathers on the hind neck have black subterminal bands which continue the color of the cap to the anterior border of the mantle; the Bogotá skins are intermediate in this respect. In the length of tail, however, the Cullcui birds are markedly different from the others, measuring 66½, 67½, and 68 mm., respectively, as against 60½–61 mm. (males), 57–58 mm. (females), and 59–62 mm. (not sexed). Hellmayr (Arch. Naturg., **90**, (2), p. 156, 1925) gives measurements for a large series of Colombian and Venezuelan skins which show the tail to

range from 55 to 64 mm.; Berlepsch (MS.) gives 58–62 mm. for six Bogotá skins and 67 mm. for a bird from Cajabamba, Perú. Apparently the length of tail is a fairly constant character.

I am unable to recognize the genus *Myiothlypis* as restricted to this species. Cabanis (Mus. Hein., 1, p. 17, 1850) originally described the genus as distinguished from *Geothlypis* and gave no characters to distinguish it from *Basileuterus*. Baird (Rev. Amer. Birds, pp. 237, 251, and 252, 1865) supplied certain characters that are shared equally with the species *flaveolus* which he placed in the same genus, remarking that the group was not sharply defined. In shape of bill, length of first primary, length of occipital feathers, and additional characters other than the details of color pattern, some specimens of *nigro-cristatus* and *flaveolus* are exactly matched. Similarly, *flaveolus* is not sharply separated from other members of the genus *Basileuterus* except on characters which are hardly of generic value. Without better definition, I believe it is better to keep the present species in the same genus as *flaveolus* and other related forms.

The species was found at Cullcui in the leafy thickets overhanging a small stream, a tributary of the Marañón River, in a humid temperate "oasis" of the arid temperate region. The birds were alert and active.

Ostinops decumanus (Pallas).

Xanthornus decumanus PALLAS, Spicil. Zool., fasc. 6, p. 1, 1769—Surinam.

Two females from Puerto Bermúdez, March 11, 1923.

Compared with two females from Lagunas and Yurimaguas, northern Perú, and with a series of skins from British Guiana, Venezuela, and Colombia.

One of the Puerto Bermúdez examples is somewhat immature and has an admixture of yellowish feathers on the thighs and carpal edges of the wings; the other is without any yellow except in the tail, being like the rest of the series. The status of the Puerto Bermúdez birds with reference to *maculosus*, which is said to occur in the Urubamba region, is impossible to determine without more material.

Ostinops angustifrons alfredi (Des Murs).

Cassicus Alfredi DES MURS in CASTELNAU, Expéd. Amér. Sud, Ois., p. 67, pl. 19, fig. 2, 1856—Santa Ana, Perú; Paris Mus.

A female from Vista Alegre, August 18, 1922.

Compared with a male and female from San Ramón and a female from Pozuzo, Perú; also with four *angustifrons* from the Río Suno,

Ecuador (Amer. Mus. Nat. Hist.); one *neglectus* from La Azulita, Venezuela; two males and a female of *oleagineus* from Maracay, Venezuela; a male and female of *salmoni* from near Salento, Colombia; two males of *atrocastaneus* from Esmeraldas and Huigra, Ecuador; and an *angustifrons* x *neglectus* from Andalucia, Colombia, 2,500 feet (Amer. Mus. Nat. Hist.).

In comparison with the San Ramón and Pozuzo birds, the Vista Alegre specimen is much more tinged with olive above and below and the outer rectrices are much less extensively yellow, having the area of that color restricted to the base where it is concealed by the under tail-coverts. The yellow on the forehead is likewise much reduced, being practically absent in mid line though present on the sides above the lores. In this latter respect it is matched by the Pozuzo bird, but the San Ramón specimens have the yellow on the top of the head reaching to or beyond the posterior border of the eyes. The bill apparently is rather uniformly light colored, but my field notes on the Vista Alegre specimen show the base of the bill to have been distinctly pale olive greenish in the freshly killed specimen. Taczanowski's account (Orn. Pér., 3, pp. 407–410, 1886) shows considerable variation among the specimens from various parts of Perú examined by him.

After a careful study of the various forms related to *alfredi*, I have reached the belief that *angustifrons* belongs to the same specific group. The present form, *alfredi*, ranges throughout Perú except in the northeastern Amazonian lowlands where, at Iquitos, Sarayacu, Nauta, Loretoyacu, and other near-by points, *angustifrons* occurs. In Ecuador, *angustifrons* is recorded from the region of Macas, Río Suno, Baeza, Río Coca, and below Oyacachi. Taczanowski and Berlepsch record *alfredi* from Mapoto, in the same general region, but Berlepsch's unpublished notes describe the Mapoto bird in sufficient detail to make it very probably a specimen of *angustifrons*, having no yellow whatever on the forehead or lores but rather a pale olivaceous coloration exactly like in specimens of *angustifrons* which I have seen from the Río Suno (Amer. Mus. Nat. Hist.). The Mapoto record, therefore, should be removed from *alfredi* to *angustifrons*.

The Peruvian race, *alfredi*, crosses into Ecuador from Perico and Bellavista (Bangs and Noble) to Zamora (Chapman) and other near-by localities in the subtropical zone, not conflicting with the range of *angustifrons*. In Colombia, *angustifrons* is confined to the lower elevations on the Amazonian side of the Andes as at La

Murelia, Florencia, and Villivicencio, while *neglectus* occupies the higher elevations on the eastern slope as at Andalucia and Monteredondo (Chapman), extending northward into Venezuela to the neighborhood of Mérida. To make this apparent relationship more significant, specimens from Andalucia and Florencia are intermediate between *neglectus* and *angustifrons* as has been pointed out by Chapman (Bull. Amer. Mus. Nat. Hist., 36, p. 626, 1917). One of these specimens (a male from near Andalucia, 2,500 feet, below Caquetá), examined in this connection, is very like Río Suno (Ecuador) specimens of *angustifrons* except that the bill is largely whitish with the basal third darker and brownish, while the bill of typical *angustifrons* is entirely black. However, a male of undoubted *angustifrons* from Río Suno has an extensive whitish area on the maxilla and a whitish spot on the tip of the mandible, showing a partial loss of the typical black coloration. The particular specimen from Andalucia might be referred to *angustifrons* showing approach to *neglectus* rather than the reverse, especially in view of the low elevation at which it was taken.

A male of *neglectus* from La Azulita, Venezuela, shows an approach to *oleagineus* from the coastal range (Maracay, San Julián, and Cumaná) in the more olivaceous tone of the body plumage and especially of the outer margins of the remiges. The forehead is broadly yellow in the La Azulita bird but is variable in *oleagineus* since, in three skins from Maracay, one has a rather broad yellowish forehead, another has the yellow band reduced, and the third has no yellow whatever on the head.

To recapitulate, therefore, I believe that we have an extensive specific group ranging from Venezuela to Bolivia and including *oleagineus*, *neglectus*, *sincipitalis*, *salmoni*, *atrocastaneus*, *angustifrons*, *alfredi*, and possibly *australis*, although the latter name may prove to be a synonym of *alfredi*, judging from unpublished notes on Bolivian birds made by the late Count Berlepsch. In original description, *australis* was compared only with *sincipitalis* and *neglectus* from which it seems to differ exactly as does *alfredi*, to which no reference was made. The oldest name in the group as thus arranged is *angustifrons*.

Cacicus cela cela (Linnaeus).

P(arus) Cela LINNAEUS, Syst. Nat., ed. 10, 1, p. 191, 1758—"in Indiis"; errore, Surinam suggested by HELLMAYR, 1906.

A male from the Río Colorado, Chanchamayo Valley, January 31, 1923.

Compared with forty-two skins from northern Perú, Brazil, eastern Colombia, Venezuela, British Guiana, and the type locality, Surinam (one male); also with two females of *flavicrissus* from western Ecuador.

A wide-ranging species of the tropical zone. The Peruvian birds can not be separated from the Surinam examples.

Cacicus leucoramphus peruvianus (Zimmer).

Cassicus leucoramphus peruvianus ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., **12**, p. 66, 1924—mountains near Panao, Perú; Field Mus. Nat. Hist.

One male (the type) from near Panao, July 7, 1922.

Compared with a male and female from Rumicruz, Junín (Amer. Mus. Nat. Hist.); also with eleven specimens of *leucoramphus* from Laguneta, Bogotá, Almaguer, and Páramo de Tamá, Colombia (six in Amer. Mus. Nat. Hist.).

The type was found in a strip of heavy woodland, an upward extension of the subtropical zone, along the banks of the river. It was in company with *Cyanolyca viridi-cyanea jolyaea*. I suspect that it was the author of a sweet, clear whistle which was heard at this place just before the bird was seen.

Cacicus uropygialis uropygialis (Lafresnaye).

Cassicus uropygialis LAFRESNAYE, Rev. Zool., 1843, p. 290—Colombia; Paris Mus.

Cassicus uropigyalis (sic) LAFRESNAYE, Rev. Zool., 1847, p. 218—Bogotá.

Cassicus curvirostris LAFRESNAYE, Rev. Zool., 1847, p. 218—Bogotá; new name for *C. uropygialis*.

Cassicus pachyrhynchus BERLEPSCH, Journ. Orn., **37**, p. 299, 1889—Tarapoto, n. Perú; Berlepsch coll., Mus. Frankfort.

One skin from Chinchao, shot in May, 1922, by Señor Pedro Manuel Pinzas of Huánuco and presented to the Expedition.

Compared with four males and two females from Andalucia, Colombia; and Oyacachi, Baeza, and Río Sardinas, Ecuador (Amer. Mus. Nat. Hist.); also with three males of *pacificus* from Tadó and Barbacoas, Colombia, and Bulum, Ecuador; and twelve skins of *microrhynchus* from Costa Rica and Panamá.

The Peruvian specimen is inseparable from the Colombian and Ecuadorian birds. There is a great variation in size in this race and it is possible that Peruvian birds may be found to average a little larger than Colombian examples, but it is impossible to draw a line anywhere to define two well-marked groups. Unfortunately

Berlepsch failed to note any differences between his *pachyrhynchus* and what he considered to be typical *uropygialis*, although he stated that they resembled each other in the light tone of red and the restricted area of the rump patch, both of which are distinguishing characteristics of the *uropygialis* group as opposed to *haemorrhous*.

A detailed comparison of *haemorrhous* and *uropygialis* has revealed a number of differences which render easy the separation of these two species. The more extended and deeper red uropygium of *haemorrhous* is noted above. The high and evenly curved bill of *uropygialis* as compared with the somewhat flattened or even partly concave culmen of *haemorrhous* was noted by Lafresnaye as early as 1847. The satiny purplish sheen of *haemorrhous* (restricted to the tips of the feathers in *C. h. aphanes*,[1] is a prominent feature of that species when contrasted with the duller black of *uropygialis*. The more extensive white at the base of the feathers of neck and back in *uropygialis* is sometimes useful for comparison. Finally, the wing-formula is quite distinct in the two groups; *haemorrhous* has the outer primaries distinctly narrower and more attenuated than *uropygialis* and has the first (outermost) primary longer than the sixth and shorter than the fifth which in turn is distinctly shorter than the second, while the fourth (sometimes the third) is the longest; *uropygialis* has broader quills and has the first primary longer than the seventh but shorter than the sixth, while the fifth and fourth are subequal and longest.

The genus *Cacicus* of Lacépède, 1799, seems never to have had a type species designated. Ridgway (Bull. U. S. Nat. Mus., **50**, pt. 2, p. 186, 1902) accepted *Cassicus affinis* Swainson as type but cited it with an interrogation mark which may raise future objections. Lacépède's original description mentioned no particular species, a fact which leaves the road clear for subsequent designation of any species found to agree with the description. Both *Cacicus* of Daudin

[1] It is possible that this bird should bear Swainson's name *affinis*. The original plate of Swainson is somewhat equivocal (Birds Brazil and Mexico, pl. 2, 1834), and shows characters which belong to both Guianan and east-Brazilian forms. The country of origin is said to be "Brazil" but this is not conclusive in view of other errors of that sort in the same work. Swainson visited parts of eastern Brazil where "*aphanes*" occurs but not those parts of the same country inhabited by "*haemorrhous*" which, at that time, were rather inaccessible; so, if the locality is correctly given, the bird is probably the same as *aphanes*. Bonaparte (Compt. Rend., **37**, p. 833, 1853) was the first to assign Swainson's name to the Guianan race but at the same time he misidentified *haemorrhous* as the east-Brazilian form. Berlepsch (Journ. Orn., **37**, p. 300, 1889) rectified the status of *haemorrhous* and renamed the east-Brazilian subspecies *aphanes*, but offered no proof that it was not entitled to the name *affinis*. I am inclined to believe that Swainson's specimen came from the eastern coast of Brazil and that his name should be given priority over Berlepsch's *aphanes*.

and *Cacicus* of Cuvier have been favored by the designation of *Oriolus haemorrhous* Linnaeus as type species, and to make these names absolutely identical with Lacépède's earlier genus I hereby formally designate *Oriolus haemorrhous* Linnaeus as the type species of *Cacicus* Lacépède, 1799.

Pezites militaris bellicosa (De Filippi).

Sturnella bellicosa DE FILIPPI, Mus. Mediol. Anim. Vertebr., cl. 2, Aves, pp. 15, 32, 1847—"Amer. trop. occ."—I suggest Lima, Perú; Milan Mus.

Pezites brevirostris CABANIS, Mus. Hein., **1**, p. 191, 1851—"Brasilien" (errore = Peru?); Halberstadt Mus.

Leistes albipes PHILIPPI and LANDBECK, Anal. Univ. Chile, **19**, No. 5, p. 616, Nov., 1861—Perú = Arica, Chile; Santiago Mus.

Eight males and four females from Huánuco, May 27 and July 22–29, 1922.

Compared with twenty-two additional skins from Macate, Cajamarca, Menucucho, Huancabamba (Mus. Comp. Zool.), and Lima and Vitarte (Amer. Mus. Nat. Hist.), Perú; Santa Rosa, Ecuador (Amer. Mus. Nat. Hist.); and Chacalluta, Tacna, Chile (now Perú).

The Huánuco birds differ somewhat from the specimens taken on the coast and in the northern Marañón region but I am not certain of the stability of the characters. The females have the entire throat distinctly reddish with rather narrow buffy tips, the red extending almost to the bases of the feathers, whereas the throat is usually white or buff in the coastal females. The males in fresh plumage average deeper red and less scarlet than the more western examples though worn and faded specimens are not definitely distinguishable. In fresh plumage, also, the under parts are more narrowly, if at all, margined with white or buff.

Beside the characters of coloration there is the added factor of isolated distribution. *P. m. bellicosa* inhabits the arid coastal region from Tacna to Esmeraldas, Ecuador, and in Perú, at least, crosses the coastal range by a low pass in the northern part of the country and follows the eastern slopes of the western Andes southward to Cajamarca, so far as known. To reach the vicinity of Huánuco from this region, it appears to be necessary to cross the high central Andes separating the Huallaga and Marañón rivers or else to follow the river valleys through the humid tropical zone, both of which courses pass outside of the habitat of the species. The Huánuco

birds probably reached their present area of distribution by a route now closed.

I am inclined to place *bellicosa* in the same species with *militaris*. There is no pronounced difference between them except the average size of the bill which is greater in *bellicosa* than in the other two, and this is only a matter of degree. A male of *bellicosa* from Cajamarca has the culmen from base measuring 29 mm.; a male of *militaris* from Rio Nireguao, Chile, has a measurement of 30½ mm., one from Chubut, Chile, measures 31, and one from Los Yngleses, Buenos Aires, Argentina, also measures 31. The color of the Huánuco birds also suggests the rosy tone of *militaris*.

Unfortunately the name *Trupialis* can not stand for this genus, having been used for the first time in another sense by Merrem (in Ersch and Gruber, Allg. Encycl. Wiss. Kunst., **15**, p. 275, 1826) as a new name for *Oriolus* Illiger (Prodr. Syst. Mamm. Aves, p. 214, 1811), nec *Oriolus* Linnaeus. Illiger's genus included only two species, "*Oriolus Icterus* and *Cayanensis* Lin.," and as no type species has been designated for it I propose herewith as type "*Oriolus Icterus*," thus making *Oriolus* Illiger equal to *Icterus* Brisson. The type of *Trupialis* Merrem thus becomes *Oriolus icterus* Linnaeus. The oldest available name for the present group is *Pezites* Cabanis (Mus. Hein., **1**, p. 191, 1851)—new name for *Trupialis* Bonaparte (nec Merrem), the type of which was designated by Gray, 1855, as *Sturnus loyca* Molina.

This species, called "Pecho Colorado" and "Juan Chaco" by the natives, was common in the corn fields and other cultivated areas around Huánuco. Most of the birds were very fat. The song suggested that of the Red-winged Blackbird (*Agelaius phoeniceus*), resembling the syllables "o-ka-chee," but it had a quality also somewhat like that of *Sturnella magna* (not *neglecta*). The actions were distinctly those of *Sturnella*, whether the birds were walking about on the ground, perched on a leaning cornstalk, or traveling from field to field on rapidly beating wings. The birds proved to be excellent camp fare.

Tersina viridis occidentalis (Sclater).

Procnias occidentalis SCLATER, P. Z. S. London, **22**, p. 249, 1854—New Granada = Bogotá, Col.; British Mus.

Two males and two females from Vista Alegre, October 17 and 18, 1922.

Compared with seven north-Peruvian, Ecuadorian, Colombian, and Venezuelan skins; also with eleven specimens of *viridis* from Brazil and Bolivia.

The Vista Alegre birds agree with the measurements of *occidentalis* and with the other specimens referred to that race. The two males are not fully adult and are in mixed plumage. They were found singly or in small flocks about scattered trees in the open.

Tanagra xanthogaster quitensis Nelson.

Tanagra xanthogaster quitensis NELSON, Smith. Misc. Coll., 60, p. 16, Sept. 27, 1912—"Quito"; U. S. Nat. Mus.

Two males from Vista Alegre, August 26 and October 15, 1922; a male and female from Huachipa, September 9 and 18.

Compared with two males from Moyobamba, a male from Rioja, and three females from Puente de Chimbo, western Ecuador; also with nine skins of *brevirostris* from Bogotá and Andalucia, Colombia, and the Carimang River, British Guiana, and a male of what appears to be *chocoensis* from El Roble, Quindio Andes, Colombia.

This group is greatly in need of revision but I have not the material to undertake it. At present I am unable to place my Peruvian specimens satisfactorily. The Huachipa male nearly matches a specimen from El Roble, Colombia, which, in turn, is much paler yellow on the crown and belly than the Bogotá skins of *brevirostris*, approaching *chocoensis*. One Vista Alegre male is as deeply colored on the under parts as some of the Bogotá skins but the crown is a little brighter, less brownish. The other Vista Alegre bird is a little paler but is more orange than males from Moyobamba and Rioja, Perú; in the deep purplish iridescence on the back it is very close to males of *quitensis* from Puente de Chimbo, western Ecuador. One Moyobamba skin is nearly as purplish; another is less so; a Rioja male is bluer, less purplish than some Bogotá skins. Both Peruvian and Bogotá specimens have more iridescence on the throat than the west-Ecuadorian birds, in which the throat is duller and blacker.

The female from Huachipa is a little paler below than one from Moyobamba and both are paler than west-Ecuadorian females but like them are separable from British Guianan females (of *brevirostris?*) by much more greenish, less ochreous, yellow flanks.

In size of bill, the Ecuadorian birds are distinctly larger than all the Peruvian specimens, which are about like the Guianan and Bogotá specimens in this respect.

Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 651, 1926) has found *quitensis* to range entirely across Ecuador and into extreme northern Perú, evidently cutting off the range of *brevirostris* from Peruvian territory. Peruvian material at hand seems to be more or less distinctly separable from *brevirostris* by average paler crown and belly and to be much closer to *quitensis* in spite of the slightly but distinctly longer bill of the latter. Chapman (l. c.) considers the size of bill in Ecuadorian birds to be a variable character so that the value of this difference in the present instance needs confirmation by a larger series. In view of this fact I prefer to await more material before venturing to separate the Peruvian birds from *quitensis*.

This species was found in a variety of situations; among the miscellaneous species in the vagabond flocks of the forest, in small flocks of its own kind about flowering trees on the open hillsides, and in the low trees along the banks of the rivers. It was not seen outside of the tropical zone.

Tanagra chrysopasta chrysopasta Sclater and Salvin.

Tanagra chrysopasta SCLATER and SALVIN, P. Z. S. London, 1869, p. 438, pl. 30, figs. 1, 2—e. Perú, Río Ucayali; British Mus.

One male, Huachipa, October 3, 1922; two females, Río Colorado, Chanchamayo Valley, February 6 and 25, 1923.

No material for comparison.

The male agrees well with the original description and figure. The females disagree with the original figure by reason of having the lores and anterior malar region decidedly ashy white without a trace of the yellow as shown by the plate. Whether the discrepancy is due to incorrect coloring by the artist or to racial or individual variation, I have no material to determine. The white loral patch in the females is bordered above by a noticeable dusky line not present in the male. The significance of this character also is not determinable.

Tanagra mesochrysa tavarae Chapman.

Tanagra mesochrysa tavarae CHAPMAN, Amer. Mus. Novit., **160**, p. 9, 1925—Río Tavara, Perú; Amer. Mus. Nat. Hist.

A female from Huachipa, October 3, 1922.

No material for comparison.

The specimen agrees with the description of this recently discovered subspecies.

Chlorochrysa calliparaea calliparaea (Tschudi).

C(allospiza) calliparaea TSCHUDI, Arch. Naturg., **10**, (1), p. 286, 1844—Perú (ex LICHTENSTEIN MS.); Berlin Mus.

Two adult males and one young male from Huachipa, September 15–24, 1922.

No material for comparison.

The specimens appear to be referable to typical *calliparaea*, having the belly distinctly and strongly bluish when held away from the light and decidedly blue when held toward the light (between Peacock Blue and Oxide Blue in one adult and Oxide Blue in the other). The bluest example has the blue of the middle breast continued laterally along the posterior border of the black throat in the shape of the letter Y; in the other adult this Y is bluer green than the sides of the breast but not clear blue. The immature specimen is a little duller than the adults and has the auriculars largely green mixed with a few Burnt Sienna feathers; the rump is yellowish green with a few orange-tipped plumes, and the throat is dull black with several green-tipped buffy feathers in the middle; the belly is distinctly blue.

All the specimens were taken from among the varied members of the vagabond flocks in the heavy forest.

Tangara atrocoerulea atrocoerulea (Tschudi).

P(rocnopis) atrocoerulea TSCHUDI, Arch. Naturg., **10**, (1), p. 285, 1844—Perú; Mus. Neuchâtel.

One male from Panao, July 4, 1922.

Compared with a female of *branickii* from Molinopampa and two males and a female of *vassori* from Bogotá, Santa Elena, and Almaguer, Colombia.

This specimen has the yellowish occipital patch rather smaller than is shown in Sclater's plate (Monogr. Calliste, pl. 31, 1857), but, according to manuscript notes by the late Count Berlepsch, this feature is somewhat variable. An important feature is shown by the mantle which is not uniform black as described but very distinctly, somewhat broadly, margined with the blue of the rump. This points very strongly toward intergradation with *branickii* of north-central Perú which I am inclined to place as a race of the same species. Probably *vassori* of northwestern Perú, Ecuador, and Colombia belongs to the same group.

I agree with Miller (Auk, **36**, p. 577, 1919) that the genus *Procnopis* is too imperfectly defined to warrant its retention.

Tangara chilensis chlorocorys Zimmer.

Tangara chilensis chlorocorys ZIMMER, Proc. Biol. Soc. Wash., **42**, p. 91, 1929—Vista Alegre, Perú; Field Mus. Nat. Hist.

One male (the type) and four females from Vista Alegre, August 19–31, 1922; two adult females and one young female from Huachipa, September 18–October 7.

Compared with sixteen specimens of typical *chilensis* from the Río Colorado, Moyobamba, near Pebas, Rioja, and an unspecified locality, Perú, and Sarayacu, eastern Ecuador; two specimens of *caelicolor* from Mt. Roraima, British Guiana, and Bogotá, Colombia; and three additional specimens of the present race from Nuevo Loreto, near Tayabamba, Perú.

Detailed notes on the plumage of this race have been given in the original account. The bird is an inhabitant of the forest but is found also in adjacent groves and more openly situated trees. It is known locally as "Siete Colores," a name which, throughout Spanish-speaking countries, is given to the bird in each locality which has the most variegated plumage; as a result various birds in different parts of South America bear the same appellation.

Tangara chilensis chilensis (Vigors).

Aglaia chilensis VIGORS, Proc. Comm. Sci. Corr., Zool. Soc. London, **2**, p. 3, 1832—"Chile" =errore; Bolivia suggested by BERLEPSCH, 1912; Cuming's coll., type lost.

Three males and one young female from the Río Colorado, Chanchamayo Valley, January 31–February 7, 1923.

Compared with various specimens as noted under *chlorocorys*.

The Río Colorado specimens belong to the typical subspecies.

Tangara schrankii (Spix).

Tanagra schrankii SPIX, Av. Bras., p. 38, pl. 51, 1825—no loc.; N. Brazil suggested by BERLEPSCH, 1912; Munich Mus.

Aglaïa melanotis SWAINSON, Anim. in Menag., p. 355, 1838—Perú (probably northern part); ♀; Hooker's coll., Cambridge (Eng.) Mus.?

One male and seven females from Huachipa, September 3–28, 1922.

Compared with specimens from Chanchamayo, Nuevo Loreto, and Yurimaguas or Chamicuros (Bartlett, 1867).

The Nuevo Loreto male has the spot in front of the eye bright golden yellow instead of green and there is a yellowish tone to the

green of the upper parts, especially noticeable on the superciliaries and hind neck. The Huachipa male has a distinct, narrow, green line separating the yellow crown from the black forehead. Bartlett's specimen from Yurimaguas or Chamicuros has a rather stronger tinge of blue on the thighs than the other males.

The females (all from Huachipa) vary in the amount of yellow on the crown. Some have a distinct patch of this color (smaller than in the male) while others show only a slight yellowish tinge. One has the basal half of the middle pair of rectrices white, probably due to partial albinism.

Tangara xanthogastra Sclater.

Calliste xanthogastra SCLATER, Contr. Orn., 1851, pp. 23, 55, January, 1851—"Rio Negro," Upper Amazons (cf. SCLATER, Cat. Birds Brit. Mus., **11**, p. 106, 1886); British Mus.

I(xothraupis) chrysogaster BONAPARTE, Rev. Zool., 1851, p. 144, March, 1851—Ecuador?

Calliste xanthogastra rostrata BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 339—La Merced, Perú; Warsaw Mus.

A female from the Río Colorado, Chanchamayo Valley, February 7, 1923.

Compared with two males from Moyobamba and Rioja, northern Perú.

The Río Colorado bird is practically topotypical of *rostrata* but fails to bear out the characters of that supposed race which was described as being simply larger than typical *xanthogastra*. The racial distinction was not maintained by Berlepsch in later writings.

The two males from Moyobamba and Rioja are bluer on the back than the Río Colorado female, possibly due to sexual difference.

Tangara aurulenta pulchra (Tschudi).

C(allospiza) pulchra TSCHUDI, Arch. Naturg., **10**, (1), p. 285, 1844—Perú; Mus. Neuchâtel.

Three males and one female from Huachipa, September 11–24, 1912.

Compared with a young female from Chanchamayo; also with four males and a female of *occidentalis* from Gallera, San Antonio, and Cauca, Colombia; and three specimens of *aurulenta* from El Roble and Bogotá, Colombia.

The four Huachipa birds vary somewhat in the intensity of the chestnut patch on the throat, the tone of greenish yellow on the

mantle, and the width of the black frontal band. All are much brighter and more intensely colored than a female (probably not fully adult) from the Chanchamayo district, which is probably topotypical. The variations in the series show an evident approach toward *aequatorialis* of Ecuador. I believe that the affinities of this bird are best expressed by placing it in the *aurulenta* group, to which it shows unquestionable relationship although exact intermediates are lacking.

This tanager was found in the humid tropical forest as an occasional member of the vagabond flocks, of which it was by no means the least conspicuous unit.

Tangara cyanotis lutleyi Hellmayr.

Calliste melanotis SCLATER (nec *Aglaia melanotis* SWAINSON, 1838, = *Tangara schrankii*), Ibis, 1876, p. 408, pl. 12, fig. 1—Río Napo, e. Ecuador; British Mus.

Tangara lutleyi HELLMAYR, Verh. Orn. Ges. Bayern, **13**, (2), p. 198, 1917—new name for *Calliste melanotis* SCLATER.

A female from Huachipa, September 18, 1922.

Compared with a male from the lower Sumaco, Ecuador, a female from Sabanilla, Ecuador, a male from La Palma, Colombia, and a specimen from unknown locality and of unknown sex (Amer. Mus. Nat. Hist.); a male from Idma, Santa Ana, Perú, and two specimens of unknown sex from Archidona, Ecuador, and Bogotá, Colombia (U. S. Nat. Mus.), and a female from Chanchamayo (Field Mus. Nat. Hist.); also with a female of *cyanotis* from Yungas of Cochabamba, Bolivia (Carnegie Mus.).

The Bolivian specimen is separable from all the others by the more decidedly green mantle, blue anterior auriculars instead of all black ones, rather broader blue outer margins of the rectrices, and less buffy under wing-coverts; the central portion of the superciliary stripes are more golden yellowish, showing a greater contrast with the bluish anterior and posterior ends which, however, are no bluer than in some of the skins of *lutleyi*. The differences are certainly no more than subspecific, especially in view of the individual variability shown by the Colombian, Ecuadorian, and Peruvian series of *lutleyi*.

Tangara cyanicollis cyanicollis (D'Orbigny and Lafresnaye).

Aglaia cyanicollis D'ORBIGNY and LAFRESNAYE, Mag. Zool., **7**, cl. 2, p. 33, 1837—Yuracares, Bolivia; Paris Mus.

?Tangara cyaneicollis gularis CHAPMAN, Bull. Amer. Mus. Nat. Hist., **41**, p. 332, 1919—Candamo, s. e. Perú; Amer. Mus. Nat. Hist.

One male and three females from Vista Alegre, August 27–October 12, 1922; one adult and one young female from Chinchao, November 9–15; one male and one female from Hacienda Buena Vista, Río Chinchao, September 15, 1922 (collected by E. Heller); one male from the Río Colorado, Chanchamayo Valley, February 7, 1923.

Compared with a small series of seven skins from the Yungas of Cochabamba, Bolivia, and Chanchamayo and Junín, Perú (Field Mus. Nat. Hist. and Amer. Mus. Nat. Hist.); also with one skin of *caeruleocephala* from Moyobamba, a male from near San Augustin, a female from La Palma, and a specimen of undetermined sex from Bogotá, Colombia; a male of *cyanopygia* from Pichincha, western Ecuador; six males, one female, and one unsexed skin of *granadensis* from Río Lima, Río Zapata, San Antonio, near Palmira, and Bogotá, Colombia; and three males and two females of *hannahiae* from Colón and La Azulita, Venezuela.

There is considerable variation throughout the series but it is thoroughly mixed and without apparent geographic significance. I have not seen Urubamba specimens described by Chapman as *gularis*, but the Junín birds appear to be inseparable from Bolivian examples as subsequently remarked by Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 661, 1926) and Chanchamayo specimens are similar. The Vista Alegre examples are intermediate between typical *cyanicollis* and *caeruleocephala* but are closer to *cyanicollis*. The Río Colorado male is the most strongly marked individual in respect to the purplish patch on the throat, but it has very little purplish blue on the belly and forehead and the shoulders are not very coppery in tone, while the middle of the back is rather pronouncedly bluish, suggesting the Ecuadorian *cyanopygia*.

The young female from Chinchao (November 9) is just beginning its molt from the dull first annual plumage into adult dress.

Tangara gyroloides catharinae (Hellmayr).

C(alospiza) gyroloides catharinae HELLMAYR, P. Z. S. London, 1911, p. 1106—Chaquimayo, Carabaya, e. Perú; Munich Mus.

Nine males and five females from Huachipá and Vista Alegre, August 19–October 15, 1922.

Compared with thirteen skins of *gyroloides* from Colombia, one of *nupera* from western Ecuador, and seven of *bangsi* from Costa Rica and Panamá.

The characters of the race are well-marked in the males, less pronounced in the females.

The species was quite common in the heart of the forest where it was found among the vagabond flocks, but it also was of frequent occurrence at the edge of the woods and in more openly situated trees. It was rather active in its habits.

Iridosornis analis analis (Tschudi).

T(anagra) analis TSCHUDI, Arch. Naturg., **10**, (1), p. 287, 1844—Perú; Mus. Neuchâtel.

A male from Huachipa, September 21, 1922, and a male and three females from Chinchao, November 10–20.

Compared with a male and a female from Chilpes and Utcuyacu, Perú (Amer. Mus. Nat. Hist.); also with one Ecuadorian and nine Colombian specimens of *porphyriocephala* (Amer. Mus. Nat. Hist.) and an additional Ecuadorian skin (U. S. Nat. Mus.).

The Ecuadorian and Colombian specimens have deeper blue crown, back, and breast, darker and greener flanks, and deeper yellow under tail-coverts than the Peruvian birds, although the latter show a little variability among themselves in these particulars without approaching the northern form very closely. The two appear to be representative forms which belong to the same specific group. The females are rather duller than the males.

The type of *analis* may have come from near Lima since Tschudi (Faun. Per., Aves, p. 20, 1846) says that while the species was common in the fruit gardens of Lima he did not find it farther north nor east away from the interior of the coastal region. I did not observe it in the Rimac Valley. My Chinchao specimens were obtained from the thickets at the upper heads of the ravines in evident subtropical conditions; the Huachipa bird is from the tropical zone.

Delothraupis castaneoventris (Sclater).

Calliste castaneoventris SCLATER, Contr. Orn., 1851, p. 61—Bolivia; Liverpool Mus.

One male from the mountains near Huánuco, 10,500 feet, June 15, 1922, and three males and two females from Panao, July 3–10.

Compared with two females from Maraynioc (Amer. Mus. Nat. Hist. and U. S. Nat. Mus.), and a female, a young male, and a specimen of unknown sex from Incachaca, Bolivia (Amer. Mus. Nat. Hist. and Carnegie Mus.).

The Peruvian birds average larger than the Bolivian and have a greater amount of silvery tips on the feathers of the upper surface, but until a more satisfactory series of Bolivian birds is available I hesitate to propose a separation. There is some variation also in the degree of whiteness of the superciliary stripes and of the chin, and in the tone of rufescence on the under parts, which may not be constant.

Anisognathus lunulatus ignicrissus (Cabanis).

Poecilothraupis ignicrissa CABANIS, Journ. Orn., **21**, p. 317, 1873—Maraynioc, Perú; Berlin Mus.

Poecilothraupis lunulata intercedens BERLEPSCH, Ber. V. Int. Orn.-Kongr., pp. 1044, 1045, 1135, 1912—Leimabamba, Perú; Frankfort Mus.

Six males (one immature) and five females (four immature) from the mountains above Huánuco and Panao (10,500 feet), May 31–July 10, 1922.

Compared with a male from Levanto and a female from near Balsas, Perú; also with a male and three females of *igniventris* from Incachaca, Bolivia, two males and a female of *erythrotis* from Ecuador (two from Hoyaucshi), and four skins of *lunulata* from Cundinamarca and "Bogotá," Colombia.

The Peruvian series shows little variation in essential characters. The tone of red on the under surface is a trifle more scarlet than in *lunulata* from Colombia and *erythrotis* (=*atricrissa*) from Ecuador. The exposed portions of the feathers of the crissum are mostly entirely red, although a few of the longer under tail-coverts occasionally show black subterminal areas, and the back lacks the bluish wash of *igniventris* from Bolivia. Several specimens, however, have distinct traces of bluish edges on the remiges and greater wing-coverts, showing an approach toward *igniventris*. One male from above Huánuco has a number of feathers in the center of the lower throat margined with scarlet; the same condition is noted in a female from Incachaca, Bolivia, in the Carnegie Museum. The significance of this is not apparent. Young birds have the colors of the adults duller and with the scarlet tinged with ochreous.

It seems probable that Berlepsch's *intercedens* is the same as *ignicrissa*. A male from Levanto (one of Berlepsch's paratypes) is no different from the Huánuco birds except that it is slightly smaller, which is of no importance in view of the fact that the maximum measurements given for *intercedens* are greater than the minimum of the present series. A female from near Balsas is similar. Berlepsch

recognized both forms in his revision of the tanagers, but beyond stating that *intercedens* is intermediate between *lunulata* and "*ignicrissa*" (=*igniventris?*) he did not mention *ignicrissa* in the description of the supposed new form. His manuscript notes contain no records of comparisons made between the two forms, but there are extensive notes on the new race under the name *ignicrissa*. The characters of *intercedens* are exactly those of *ignicrissa* which is intermediate between *lunulata* and *igniventris*, and it would be difficult to find a place for another intermediate form since there is not a great deal of difference between these as they stand. It is most likely that Berlepsch (who had no Maraynioc specimens of the species) was confused by the similarity of the names *igniventris* and *ignicrissa* and redescribed the latter race as *intercedens*. In any case there are no differences to support the claims of Berlepsch's race for recognition.

It is necessary to use Reichenbach's name *Anisognathus* for this genus. The name was published on June 1, 1850 (Av. Syst. Nat., pl. 77) in connection with unmistakable figures of the generic characters of the present species, and, in 1851, Bonaparte (Rev. Mag. Zool., p. 172) designated *Aglaia ignicrissa* as the type species. Cabanis's name, *Poecilothraupis*, was published ostensibly in 1851 (though probably late in 1850) but is certainly antedated by *Anisognathus* which, in turn, is antedated but not preoccupied (according to the recommendations under Article 36 of the International Rules of Zoological Nomenclature) by *Anisognatha* Lacordaire, 1848—*Coleoptera*. With the amount of detail in Reichenbach's published figure, his name can not be dismissed as a nomen nudum.

The species inhabited the temperate forest at moderate elevations. It was found in small flocks (possibly family groups) and singly, usually in the neighborhood of thickets though occasionally in more openly situated trees.

Thraupis episcopus caeruleus Zimmer.

Thraupis episcopus caeruleus ZIMMER, Proc. Biol. Soc. Wash., **42**, p. 94, 1929—Vista Alegre, Perú; Field Mus. Nat. Hist.

Two males (including the type) and one female from Vista Alegre, August 20–October 14, 1922, and two males and a female from Chinchao, October 28–November 17.

Compared with five males and seven females from Moyobamba, two females from Yurimaguas, and two young females from Hacienda Limón, Perú; also with three skins of *major* from San Ramón, Perú;

eleven specimens of *coelestis* from Porto Velho, Caviana, São Paulo de Olivença, Tonantins, and Manacapurú, Brazil (five in Carnegie Mus.); and eighteen specimens of *episcopus* from the three Guianas and Bôa Vista, Manáos, Itacoatiará, Utinga, São Luis, Barra do Corda, São Bento, and Codó, Brazil.

Detailed notes on the plumages were given in the original description.

This pretty species was found most commonly about the trees in somewhat open situations. Its note is a soft, highly-pitched and rapid monotone which bears a curious resemblance to the tone of a squeaky violin, for which reason the bird is known locally as "Violinista."

Thraupis palmarum melanoptera (Sclater).

Tanagra melanoptera SCLATER, P. Z. S. London, **24**, p. 235, 1856—n. e. Perú and Bogotá; n. e. Perú suggested by BERLEPSCH, 1912; Bremen Mus.

A female from Vista Alegre, August 22, 1922.

Compared with three skins from Rioja and Yurimaguas, Perú, and various other localities in Central America, Colombia, Venezuela, northern Brazil, and Bolivia; also with a series of *palmarum* from eastern Brazil.

This species appeared to be rather uncommon in the localities visited. It was known locally as "Violinista Real."

Thraupis darwinii (Bonaparte).

Tanagra Darwinii BONAPARTE, P. Z. S. London, **5**, p. 121, 1837—Chile(?); s. w. Perú suggested by BERLEPSCH, 1912.

T(anagra) frugilegus TSCHUDI, Arch. Naturg., **10**, (1), p. 286, 1844—Perú; Mus. Neuchâtel.

?Tanagra darwini laeta BERLEPSCH and STOLZMANN, Ornis, 1906, p. 81—Cuzco, Perú; Berlepsch coll., Frankfort Mus.

A male and a female from Matucana, May 2, 1922; four males and two females from Huánuco, 6,500–10,500 feet, May 31–August 9; a female from Panao, July 16; a female from Chinchao, November 15; and two males and three females from Cullcui, Marañón River, December 13–16.

Compared with five males and two females from Cajamarca, two males and a female from Hacienda Llagueda, four males from Macate, and a male and three females from Putre, Tacna, Perú, and a male from "Ecuador."

The Matucana specimens are virtual topotypes according to Berlepsch's subsequent designation of type locality or, if extreme southwestern Perú was meant, the Putre, Tacna, birds must be topotypical. In addition to the specimens in hand I have had access to Berlepsch's manuscript notes, thanks to Dr. Hellmayr, which contain measurements of specimens from various other localities. So far as size is concerned, I agree fully with Chapman's conclusions (Bull. Amer. Mus. Nat. Hist., **55**, p. 674, 1926) that there is but one form recognizable from Cuzco to Ecuador. The differences in color ascribed to *laeta* by Berlepsch and Stolzmann were found by Chapman (l. c.) to be inconstant. Possibly the types of *laeta* showed an approach toward the brighter colors of *bonariensis* which has been recorded by Sclater and Salvin (P. Z. S. London, 1869, p. 697) from Cosnipata, Perú.

The origin of Bonaparte's type is shrouded in mystery. Bonaparte says that it was a "Chilean bird in the British Museum brought to this country by the Expedition under Capt. Fitzroy," but that expedition secured specimens only of *bonariensis*, at Maldonado, Uruguay. Furthermore there are no records of any specimens of the western species which would have been available to Bonaparte; the first definite published account of such is Tschudi's description of *Tanagra frugilegus* from Perú, collected in 1838 or later. It was supposed for a time that Bonaparte had described the female of "*striata*" (=*bonariensis*), and Bonaparte himself follows that supposition in his Conspectus Generum Avium. Sclater (P. Z. S. London, 1858, p. 453), upon examining alcoholic specimens from Ecuador, decided that *darwinii* was based on a male of the western form and not a female of the eastern species, and this conclusion has been accepted to date. The characters of the female *bonariensis* do not answer Bonaparte's description and Sclater's conclusions are probably correct, but the mystery surrounding Bonaparte's type still remains to be cleared.

At Huánuco, this bird was known as "Pichaco." It was found in the open woods of the temperate zone and in the trees adjacent to the buildings of the towns and plantations.

Thraupis cyanocephala cyanocephala (D'Orbigny and Lafresnaye).

Aglaia cyanocephala D'ORBIGNY and LAFRESNAYE, Mag. Zool., 7, cl. 2, p. 32, 1837—Yungas, Bolivia; Paris Mus.

Tanagra Maximiliani D'ORBIGNY, Voy. Amér. Mérid., Ois., p. 276, 1839—new name for *Aglaia cyanocephala* D'ORBIGNY and LAFRESNAYE; Enquisivi, Sicasica, Bolivia.

One male from Chinchao, November 14, 1922.

Compared with a male of *olivi-cyanea* from Maracay, Venezuela; five males, three females, and a specimen of undetermined sex of *auricrissa* from Bogotá, Santa Elena, Barro Blanco, and Páramo de Tamá, Colombia, and Conejos and Escorial, Venezuela; also (for generic characters) with examples of the typical or other subspecies of *T. darwinii, bonariensis, abbas, palmarum, episcopus, glaucocolpa, cana,* and *sclateri.*

I am unable to separate *Sporathraupis* from *Thraupis.* The wing formula is a variable feature and in other races of *cyanocephala* is matched by various species of the genus *Thraupis.* The narrow operculate nostril is possessed by *darwinii, bonariensis,* and *glaucocolpa;* the comparative length of wing, tail, and tarsus is shared by *darwinii, bonariensis,* and other species. On the whole, *darwinii* and *bonariensis* share most of the characters ascribed to *Sporathraupis,* leaving only the shape of the bill which in these two is large and heavy but in *cyanocephala* is relatively slender. If *cyanocephala* is generically distinct from *ornata, coelestis,* and the other "blue tanagers," *darwinii* and *bonariensis* together should be separated in another genus of equal value, but since none of the characters are perfectly distinctive I prefer to follow Berlepsch and Sclater in recognizing a single genus *Thraupis* for all of them.

Ramphocelus carbo connectens Berlepsch and Stolzmann.

Rhamphocelus jacapa connectens BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 344—La Merced, Perú; Berlepsch coll., Frankfort Mus.; type also claimed by Warsaw Mus.

One male and two females from the Río Colorado, Chanchamayo Valley, January 29–February 14, 1923, and a male from Puerto Bermúdez, March 16.

Compared with a male from San Ramón and one from the Urubamba region.

The Río Colorado and the San Ramón birds are virtual topotypes. The male from Río Colorado shows purer black above and below while the Puerto Bermúdez specimen is faintly washed with maroon. The San Ramón male is like the Puerto Bermúdez bird and the Urubamba specimen is even more reddish.

Ramphocelus melanogaster transitus Zimmer.

Ramphocelus melanogaster transitus ZIMMER, Proc. Biol. Soc. Wash., **42**, p. 95, 1929—Chinchao, Perú; Field Mus. Nat. Hist.

A male (the type) from Chinchao, October 25, 1922; an adult male, two young males, and two females from Vista Alegre, August 17–October 17.

Compared with fourteen specimens of *melanogaster* from northern Perú (two in U. S. Nat. Mus. and one, the type of *R. luciani* Lafresnaye, in Mus. Comp. Zool.).

Detailed notes on the plumage of this subspecies were published with the original description.

The bird was not very common and was seen usually in small flocks about certain large trees in the neighborhood of the hacienda buildings.

Piranga rubra rubra (Linnaeus).

(*Fringilla*) *rubra* LINNAEUS, Syst. Nat., ed. 10, **1**, p. 181, 1758—America; based on CATESBY'S *Muscicapa rubra*, Hist. Nat. Carolina, **1**, p. 56, pl. 56.

Three males from Chinchao, November 5–18, 1922; one female from Huachipa, October 5; and one male from the Río Colorado, Chanchamayo Valley, February 6, 1923.

Compared with a series of *rubra* from North and Central America, and three specimens from Venezuela; also with a single male of *cooperi* from Arizona.

One of the males from Chinchao (November 5) apparently is in first annual plumage; another (November 17) seems to be adult but is in worn, orange-tinted yellow; the third (November 18) is entirely red. The spring male from Río Colorado (February 6) is just completing a molt from yellow to red and retains the old worn plumage in the outer remiges and wing-coverts and the lower belly and flanks.

The Peruvian birds (and the Venezuelan) appear to be referable to *rubra*, but all of the males are distinctly paler red than the average specimen from North America in either winter or summer plumage. However, a specimen from North Carolina and another from Florida, which must be *rubra*, are about the same hue. The specimens are noticeably darker above than the male of *cooperi* and though within the measurements of *cooperi* are small for that form. Only *rubra* has been recorded from South America.

Piranga flava lutea (Lesson).

Pithylus luteus LESSON, l'Inst., **2**, No. 72, p. 317, 1834—Callao, Perú; ♀; type lost? (Mus. Rochefort?)

Pyranga testacea tschudii BERLEPSCH and STOLZMANN, P. Z. S. London, 1892, p. 375—Lima, Perú; Frankfort Mus.

Two males from Santa Eulalia, April 19, 1922; a male from Vista Alegre, August 27; two males and a female from Chinchao, October 28–November 8; a female from Cullcui, Marañón River, December 13.

Compared with a male from Hacienda Limón, Perú, and nine specimens from Ecuador (eight in Amer. Mus. Nat. Hist.); also with series of all the allied races except *haemalea* as detailed in my review of the species (Field Mus. Nat. Hist. Publ., Zool. Ser., **17**, No. 5, pp. 167–219, 1929).

Piranga leucoptera ardens (Tschudi).

Ph(oenisoma) ardens TSCHUDI, Arch. Naturg., **10**, (1), p. 287, 1844—Perú; Mus. Neuchâtel.

A male and female from Vista Alegre, August 20 and 21, 1922; an adult male and a young male from Huachipa, October 7.

Compared with a series of *leucoptera* from Nicaragua and Guatemala, and a male of *latifasciata* from Costa Rica.

The adult males agree with Tschudi's description except in the matter of the forehead. Tschudi describes the forehead as black but in my specimens it is quite uniform red with the black confined to the lores, nasal plumes, and an incomplete circumocular line interrupted on the lower eyelid. Taczanowski (Orn. Pér., **2**, p. 497, 1884) gives a description which agrees well with my specimens and says that the front lacks a black border. It is probable that Tschudi meant the fine black tips on the nasal plumes or possibly he had specimens showing a greater extent of black than the series at hand. Berlepsch (Ber. V. Int. Orn.–Kongr., p. 1066, 1912) notes that Colombian examples of *ardens* have a black forehead, and both *leucoptera* and *latifasciata* are similarly provided.

Both adult males show occasional yellow feathers in a few places through the plumage, though they evidently are fully adult. The young male is mixed Grenadine Red, Lemon Chrome, and Olive Yellow, with conspicuous white terminal spots on the tertials and secondaries which are suggested on the outer margins of the tips of the primaries. The female is much deeper yellow than the female of *leucoptera* and the adult males are purer (less scarlet) red.

Habia rubica peruviana (Taczanowski).

Phoenicothraupis peruvianus TACZANOWSKI, Orn. Pér., **2**, p. 498, 1884—Yurimaguas and Monterico, Perú; type from Yurimaguas; Warsaw Mus.

Two males and a female from Puerto Bermúdez, March 17 and 19, 1923.

Compared with an adult male, female, and young male of *amabilis* from Río San Antonio and Río Espirito Santo, Bolivia.

The Peruvian males are appreciably lighter, more brick red, in coloration than the Bolivian male and appear to represent Taczanowski's form, but the value of the characters is impossible to determine without more material. Berlepsch described *amabilis* as darker than *rhodinolaema* of Ecuador; Chapman (Bull. Amer. Mus. Nat. Hist., **55**, p. 679, 1926) found *rhodinolaema* to be darker than *amabilis*.

These birds were found in the partially inundated forest among the bushes. They were very wary and alert, usually escaping from the back of their retreat and flying low to other shelter when approached too closely. After a partial emergence to look at the intruder they thereafter kept well out of sight though, judging by their voice and the movement of the foliage, in constant, nervous motion.

Lanio versicolor versicolor (D'Orbigny and Lafresnaye).

Tachyphonus versicolor D'ORBIGNY and LAFRESNAYE, Mag. Zool., **7**, cl. 2, p. 38, 1837—Yuracares, Bolivia; Paris Mus.

Three males and one female from Huachipa, September 11–October 3, 1922.

No material for comparison.

The specimens were taken in the heavy forest associated with the mixed species of the vagabond flocks, usually high in the trees. The present form appears to be rare in collections.

Tachyphonus surinamus brevipes Lafresnaye.

Tachyphonus brevipes LAFRESNAYE, Rev. Zool., 1846, p. 206—Colombia; Paris Mus.

Tachyphonus Napensis LAWRENCE, Ann. Lyc. Nat. Hist. N. Y., 8, p. 42, 1864—Río Napo, e. Ecuador; Amer. Mus. Nat. Hist.

A male from Puerto Bermúdez, March 13, 1923.

Compared with two males from "Bogotá," Colombia; also with a male of *surinamus* from Surinam and three skins from British Guiana, and with three skins of *insignis* from Utinga and Santarem, Brazil.

The Peruvian bird differs from the two "Bogotá" examples by having the uropygium deeper cinnamomeous, exactly matching the lower flanks; the posterior portion of the occipital patch is hardly paler than the anterior portion, and the bases of the central throat feathers are white. Whether or not these characters are significant can be determined only from a larger series than is available at present. On certain feathers of the throat, breast, and upper flanks there are subterminal bands of cinnamomeous buff, and fine rufescent tips are present on most of the feathers of the breast, upper flanks, and abdomen, suggesting a tendency toward a pale cinnamomeous under surface.

Tachyphonus rufiventer Spix.

Tanagra rufiventer SPIX, Av. Bras., 2, p. 37, pl. 50, fig. 1, 1825—"sylvis Parae"; São Paulo de Olivença emend. HELLMAYR, 1919; Munich Mus.

Tachyphonus metallactus OBERHOLSER, Proc. Biol. Soc. Wash., 32, p. 240, 1919—new name for *Tanagra rufiventer* SPIX (nec *Tanagra rufiventris* VIEILLOT, 1819).

Two males and two females from Vista Alegre, August 20–October 14, 1922.

Compared with a male from Rioja.

One of the Vista Alegre males is not fully adult. It has the yellow crest paler than the other and retains a few olive feathers on the shoulder; otherwise it is like the adult. The male from Rioja agrees with the other birds.

According to the International Code of Nomenclature, *rufiventris* does not preoccupy *rufiventer*.

Thlypopsis ornata media subsp. nov.

Type from Cullcui, Marañón River, Perú. Altitude 10,400 feet. No. 60,161 Field Museum of Natural History. Adult female. Collected December 15, 1922, by J. T. Zimmer. Original number 3,324.

Diagnosis.—Exactly intermediate between *T. o. ornata* from central Ecuador and *T. o. macropteryx* from south-central Perú, having the coloration of *ornata* and the size of *macropteryx*.

Habitat.—North-central and northern Perú and southern Ecuador.

Description of type.—Forehead and sides of the face, including the superciliary region, Mars Yellow x Ochraceous Buff; crown darker, Mars Yellow x Sudan Brown; nape with a faint tinge of

olive; back Deep Olive Gray x Dark Olive Gray; rump slightly paler, tinged with buffy on the sides. Chin and throat bright Antimony Yellow x Ochraceous Buff; breast, flanks (broadly), and under tail-coverts Cinnamon x Ochraceous-Tawny; median line of belly broadly white. Wings and tail dark Hair Brown, edged largely with the color of the back; outer margins of primaries paler, whitish; upper wing-coverts with exposed portions the color of the back; under wing-coverts, axillars, and inner margins of remiges white. Iris brown; maxilla black; mandible light blue; feet dull pale blue. Wing, 70 mm.; tail, 53; exposed culmen, 11; culmen from base, 14; tarsus, 21.

Remarks.—Three males of *ornata* from Huigra, Ecuador, have wing lengths of 55, 56, and 58½ mm. respectively; two females from Chunchi, Ecuador, show 56 and 58 mm.; a female from Cayandeled has the wing 55 mm. Berlepsch's description of *macropteryx* adds 57 mm. for a male of *ornata* from Bugnat, Ecuador, and 61½, 61, and 55 mm., respectively, for a male and two females from Cayandeled, while for *macropteryx* are given 67¾–71½ mm. for four males and 66 mm. for a female, from Maraynioc. A male and female of *macropteryx* from Chipa and Rumicruz, examined in this connection, measure 65 and 61½ mm., respectively. Thus *ornata* ranges from 55–61½ mm. (males) and 55–61 mm. (females) while *macropteryx* shows 65–71½ mm. (males) and 61½–66 mm. (females).

A Taraguacocha male and a Loja female of the present subspecies have the wings measuring respectively 64 and 62 mm.; a male, a female, and an unsexed bird from San Pedro, Perú, measure 67, 62, and 63 mm. Hellmayr (MS.) adds the following figures: five males from San Pedro, wing, 63¼–64 mm. (immature birds) and 66–67 mm. (adults); a male from Leimabamba, wing, 68 mm.; four females from San Pedro, wing 65 mm. (immature) and 61½–63 mm. (adults); one female from Leimabamba, wing, 63 mm. Together with the type the series shows the males to have a wing length of 62–68 mm. and the females 61½–70 mm.

The differences in coloration between *ornata* and *media* on the one hand and *macropteryx* on the other appear to be as follows. In *macropteryx* the top of the head is darker and less yellowish, being about dark Sanford's Brown; the breast and throat are more cinnamomeous, about Ochraceous Tawny x Ochraceous Orange; the belly is more broadly white and the flanks correspondingly narrow; the latter are less rufescent, being a grayish olive buff.

It may seem unnecessary to describe this form which apparently differs from *ornata* only in size but if the north-Peruvian and south-Ecuadorian birds were placed in *ornata* it would give that species a variation in wing length equal to about twenty-seven per cent of the minimum measurement, an unusually large amount. Since the difference in size is correlated with distribution and a large area of habitat is provided for the new form, it seems advisable to name the intermediate race. Measurements other than that of the wing are less definitive; the tail of *ornata* ranges from 43 to 53 mm.; that of *macropteryx*, 55½–61 mm.; that of *media*, 50–58. The sexes are not appreciably different.

Material examined:

T. o. ornata—Ecuador: Huigra, Chimbo 3 ♂[1]; Chunchi 2 ♀[1]; Cayandeled 1 ♀[2].

T. o. macropteryx—Perú: Chipa, Junín 1 ♂[3]; Rumicruz, Junín 1 ♀[3].

T. o. media—Perú: Cullcui, Marañón R. 1 ♀ (type); San Pedro 1 ♂ 1 ♀[2], 1?[3]. Ecuador: Taraguacocha 1 ♂[3]; Loja 1?[3].

Thlypopsis pectoralis (Taczanowski).

Nemosia pectoralis TACZANOWSKI, Orn. Pér., 2, p. 508, 1884—Acancocha, c. Perú; ♀; Warsaw Mus.

Five males and two females from the mountains near Huánuco, May 31–June 16, 1922, and a female from Panao, July 11.

No material for comparison.

My specimens agree very well with Taczanowski's description of this well-marked species of which only the type has been known up to the present time. One male and two females are immature. They differ from the adults in having the ochraceous color of the throat and breast much paler, being deep buff on the breast, ochraceous buff on the front, lores, superciliary stripes, and the sides of the head, and clearer yellow on the chin and throat. The crown and nape are buffy olive greenish, sharply defined against the superciliary line but blending more gradually into the lighter forehead and the darker back. The back is inclined to be somewhat lighter olivaceous than that of the adults.

[1]Specimens in Academy of Natural Sciences, Philadelphia.

[2]Specimens in United States National Museum, Washington.

[3]Specimens in American Museum of Natural History, New York.

Judging by the slender bill and straighter culmen, *pectoralis* is more closely related to *ornata* than to *inornata* or *sordida*.

The birds inhabited the bushy growth along the little streams of the mountain side. Occasionally an individual would mount to the upper twigs in the open to sing, but usually they remained secreted in the foliage.

Hemispingus leucogaster (Taczanowski).

Dacnidea leucogastra TACZANOWSKI, P. Z. S. London, 1874, p. 131, pl. 19, fig. 2—Maraynioc, Perú; Warsaw Mus.

Two males from Panao, July 3 and 16, 1922.

Compared with two females from Molinopampa.

The Panao birds agree fairly well with Taczanowski's description except that one of them has the feathers of the forehead with a distinct whitish terminal dot; this marking tends to pass posteriorly down the center of the crown but is lost in a slightly grayish median stripe. The other specimen has no frontal white except on the superciliary stripe but the center of the whole top of the head is grayish, leaving a dusky border on each side above the superciliaries.

The two females from Molinopampa have even more white on the front and less dusky on the crown than my specimens, and have noticeably less pale gray across the breast and more buffy suffusion on the flanks.

Schistochlamys melanopis grisea Cory.

Schistochlamys atra grisea CORY, Field Mus. Nat. Hist. Publ., Orn. Ser., **1**, p. 346, 1916—Rioja, Perú; Field Mus. Nat. Hist.

A male and a female from Vista Alegre, October 17 and 18, 1922, and a female from Chinchao, October 29.

Compared with the type (female) from Rioja and a male and female from Moyobamba; also with a supposed female of *melanopis* from Mana, French Guiana (Carnegie Mus.), a male and female from Caracas, Venezuela, a male and three females from Colón, Venezuela, and two Bogotá skins (one in Amer. Mus. Nat. Hist.); with twenty-three specimens of *olivina* from Chapada and Cuyabá, Matto Grosso, Brazil (mostly in Amer. Mus. Nat. Hist.), and with thirteen Bolivian examples of the same form from Province del Sara, Buenavista, Río Surutú, Río Quiser and Mapiri (twelve in Carnegie Mus., one in Amer. Mus. Nat. Hist.).

Examination of this series shows that *grisea* is distinctly separable from typical *melanopis* by darker gray coloration and more extensive but less sharply defined black of the crown, which is slightly duller in tone. From *olivina* it proves to be equally distinct by darker gray coloration above and below and by the deeper black of the crown (which is distinctly brownish in *olivina*). Most of the Matto Grosso specimens of *olivina* are relatively old skins but the Bolivian series is recent, showing that the differences are not due to fading as otherwise might be supposed.

Cissopis leveriana leveriana (Gmelin).

L(anius) Leverianus GMELIN, Syst. Nat., **1**, (1), p. 302, 1788—based on the Magpie Shrike of LATHAM, Syn. Av., **1**, (1), p. 192, No. 49, 1781; loc. ign. (Guiana = French Guiana cited by LATHAM, Suppl. Synop., **1**, p. 54, 1787).

L(anius) picatus LATHAM, Index Orn., **1**, p. 73, 1790—Amer. merid.

Corvus collurio DAUDIN, Traité d'Orn., **2**, p. 246, 1800—"Chine ou à Cayenne."

Cissopis leverianus VIEILLOT, Analyse, p. 40, 1816.

Cissopis bicolor VIEILLOT, Nouv. Dict. Hist. Nat., nouv. éd., **26**, p. 417, 1818—part, Guiana.

Cissopis minor TSCHUDI, Faun. Per., Aves, p. 211, 1846—c. e. Perú and Brit. Guiana; type from Perú; Mus. Neuchâtel.

Bethylus medius BONAPARTE, Consp. Av., **1**, p. 491, 1850—Guiana.

A male from Puerto Bermúdez, March 8, 1923; one female from Huachipa, October 5, 1922; two females from Vista Alegre, August 24 and 27, 1922.

Compared with a series of twelve skins from Moyobamba, Perú; Florencia, Colombia; Tachira, Venezuela; Porto Velho, Brazil; and Hyde Park, British Guiana; also with two females of *major* from Minas Geraës, Brazil, and Misiones, Argentina.

The two specimens of *major* are recognizably distinct but the remainder of the series can not be subdivided satisfactorily. Most of the Peruvian skins have the glossy anterior parts a little greener than the Guianan and some of the Venezuelan specimens, but a Moyobamba female and two Colombian birds resemble the Guianan birds while two Venezuelan specimens are like the Peruvian in this respect. The size and shape of the bill and the white markings on the tertials, greater upper wing-coverts, and rectrices are variable without geographic significance.

Tschudi described his *minor* from Perú but included Guiana in the range, attempting only to separate these birds from the Brazilian

form which he called "*bicolor*" (=*major*). No one, apparently, has succeeded in separating the Peruvian birds from typical *leveriana*.

The species was found principally at the edge of the forest in the tropical zone. It was known locally as "Pichi Blanco" and "Mercenario."

Pheucticus chrysopeplus chrysogaster (Lesson).

Pitylus chrysogaster LESSON, Cent. Zool., p. 209, pl. 67, 1831—"Chili" = Perú?; type lost.

A male from Santa Eulalia, April 22, 1922; two males and a female from Huánuco, July 20–28; two males and a female from Chinchao, October 29–November 11; a young male from Vista Alegre, August 21.

Compared with a female of *chrysopeplus* from Mexico.

The adult males are quite variable in the tint of orange yellow or lemon yellow and in the amount of black and yellow on the mantle, but otherwise they agree among themselves. All have more or less white on the outer margins of the outer remiges near the tips, in some cases a considerable amount.

As may be supposed, this bird is rather conspicuous in the field. It favors the lightly wooded river bottoms and groves in the arid tropical and arid subtropical zones.

Spermophila simplex Taczanowski.

Spermophila simplex TACZANOWSKI, P. Z. S. London, 1874, p. 132—Lima, Perú; Warsaw Mus.

Two males and a female from Chosica, April 14–16, 1922.

Compared with a female from Macate.

The Chosica birds are virtual topotypes. One of the males is not quite adult; the other male and the female are badly worn.

This finch is an inhabitant of the weed patches, bushes, and cotton fields of the arid lowlands along the Rimac River.

Spermophila nigricollis inconspicua (Berlepsch and Stolzmann).

Sporophila gutturalis inconspicua BERLEPSCH and STOLZMANN, Ornis, 13, p. 84, 1906—Santa Ana, e. Perú; Frankfort Mus.

Two adult males, one nearly adult male, and one still younger male from Huánuco, May 24–July 21, 1922; one male from Chinchao, October 24.

Compared with a male from Moyobamba, a young male and a female from Yurimaguas, and a female from San Ramón, Perú; also with nineteen males of *nigricollis* from Brazil (Ceará, Goyaz, Bahia, and Minas Geraës).

The validity of *inconspicua* has been questioned by Todd and Carriker (Ann. Car. Mus., **14**, p. 514, 1922), but there appear to be good grounds to favor its retention. In the series of *nigricollis* from Brazil, there is none which does not have a greater extent of deeper black on the head and throat than any of the adult Peruvian males. A single specimen from Varzea Formosa, Ceará, has the top and sides of the head and the sides of the throat and breast largely olivaceous, the feathers on the center of the throat and chest broadly tipped with yellowish olive, and the back brighter olive than in any other of the Brazilian examples, but this specimen is in molt and not fully adult. Its plumage is comparable to that of a nearly adult male from Huánuco in comparison with which the black of the Varzea Formosa skin is deeper and more extensive, thus carrying out the distinguishing features of the two forms. The remarks of Todd and Carriker were formulated upon examination of Venezuelan and Colombian, but not Brazilian, specimens and it is possible that birds from these northern regions are unusually variable and not of assured identity. However, the type locality of *nigricollis* is Brazil and the evidence at hand shows good uniformity among specimens from that country and uniform distinction among Peruvian skins. For these reasons, whatever the status of Colombian and Venezuelan birds, I believe that *inconspicua* is entitled to recognition.

Spermophila luctuosa Lafresnaye.

Spermophila luctuosa LAFRESNAYE, Rev. Zool., 1843, p. 291—Colombia; Mus. Comp. Zool.

Pyrrhula leucomelas LESSON, Echo du Monde Savant, **11**, p. 234, Aug. 4, 1844 (Reprinted papers, p. 186, 1913)—"Amérique"; Abeillé collection, type lost?

Three males and two females from the mountains near Huánuco, 10,500 feet, May 31–June 10, 1922; an adult and a young male from Vista Alegre, October 11; a female from Chinchao, November 18.

Compared with three males from Cajamarca and Yurimaguas, Perú, and three skins from "Bogotá."

The series is rather uniform in color characters, most of the males showing more or less irregular spotting with brown or gray-tipped

feathers; the Bogotá specimens have paler bills, due possibly to seasonal difference or post-mortem change.

Spermophila obscura obscura (D'Orbigny and Lafresnaye).

E(mberiza) obscura D'ORBIGNY and LAFRESNAYE, Mag. Zool., 7, cl. 2, p. 81, 1837—Chiquitos, Bolivia; Paris Mus.

Spermophila obscura TACZANOWSKI, P. Z. S. London, 1874, p. 519—Paltay-pampa, Perú; formerly Warsaw Mus., now lost.

Spermophila pauper BERLEPSCH and TACZANOWSKI, P. Z. S. London, 1884, p. 293, pl. 24, fig. 2—Cayandeled, w. Ecuador; Warsaw Mus.

A young male from Huachipa, September 22, 1922; an adult male, a young male, and a female from Vista Alegre, August 19–October 14.

Compared with three skins from Hacienda Limón, near Balsas, northern Perú, and one skin from Buenavista, Bolivia.

While showing some individual variations, the series at hand evidently represents a single form. The Huachipa and Vista Alegre birds are darker and browner, the Hacienda Limón specimens are paler and, in one case, distinctly more olivaceous, and the Bolivian bird is rather nearer the Vista Alegre skins above though paler below, like the north-Peruvian specimens.

Catamenia inornata minor Berlepsch.

C(atamenia) inornata minor BERLEPSCH, P. Z. S. London, 1885, p. 115—Cechce, Ecuador; Frankfort Mus.

Four males (two immature) and one female (immature) from the mountains near Huánuco, 10,500–12,200 feet, June 1–28, 1922.

Compared with a series of *minor* from Ecuador (Amer. Mus. Nat. Hist.) and a series of *inornata* from the provinces of Catamarca and Tucumán, Argentina.

In size the Huánuco specimens are distinctly referable to *minor* and in color probably also, although there does not seem to be a very marked difference among these races in that respect; the adult males of *minor* may average a little buffier below.

I can not see the advisability of recognizing a separate genus, *Idiospiza*, for this species, which is certainly very close to *Catamenia analis*. Both species, *analis* and *inornata*, approach a median point where the ninth and third primaries (counting from the inside) are equal; the bills are not greatly different, especially in picked specimens; the difference in acuteness of the tips of the rectrices is hardly generic in value; and there is, at least in one case, a trace of white on

the inner margins of the rectrices in *minor*, suggesting the inception of a white area on the inner web as in *analis*. I believe that the relationship is best expressed by retaining *inornata* in *Catamenia*.

Catamenia analis analoïdes (Lafresnaye).

Linaria analoïdes LAFRESNAYE, Rev. Zool., 1847, p. 75—Lima, Perú; Paris Mus.

Two males and a young female from Matucana, April 28 and May 2, 1922.

Compared with a young male from Mirador (near Macate), Perú, and with five skins from Huancabamba (Amer. Mus. Nat. Hist.); also with six specimens of *analis* from Parotani, Bolivia and Concepción, Tucumán, Argentina; six males of *söderstromi* from Quito, El Paso, Valle de Cumbaya, and Valle Tumbaco, Ecuador (Amer. Mus. Nat. Hist.); and a male of *schistaceifrons* from Bogotá, Colombia.

The Matucana specimens are about topotypical. The adults show the prominent characteristics of white belly and broad white wing speculum which indicate the affinity of typical *analis*, to which they are closer in these respects than are any other races of the species. They differ from *analis* by having a broader black area in the plumage at the base of the bill, in a somewhat smaller speculum, and in whiter, narrower, and more sharply defined outer margins on the outer remiges. The differences which Chapman noted (Amer. Mus. Novit., **143**, p. 10, 1924) in the arrangement of the white band at the base of the primaries in *analis* and *analoïdes* does not appear to be as fixed in the series at hand as was evidently the case in Chapman's series. One of the Matucana males has the white of the inner and outer webs of certain primaries confluent at the extreme base beneath the primary-coverts while a male of *analis* from Concepción, Tucumán, Argentina, has the white of the inner web extended down the inner margin toward the tip, though not as far as it reaches in typical *analoïdes*. I believe that extensive series of both forms would show still closer approximation even though the interposed race, *griseiventris*, is developed in another direction and does not show intermediate characters; there are many similar instances where closely allied subspecies are separated by an apparently aberrant but related race.

Catamenia analis insignis subsp. nov.

A young male from Cullcui, Marañón River, December 11, 1922.

Compared with three males from Cajamarca and a series of *analis*, *söderstromi*, *analoïdes*, and *schistaceifrons* as listed under *analoïdes*.

The Cullcui and Cajamarca specimens show certain characteristics which distinguish them from *griseiventris* and *analoïdes* and I propose, therefore, to separate them as a distinct subspecies under the name *insignis*.

Type from Cajamarca, Perú. No. 49,447 Field Museum of Natural History. Adult male. Collected April 19, 1912, by W. H. Osgood and M. P. Anderson. Original number 2,527.

Diagnosis.—Closely related to *C. a. griseiventris* but wing speculum obsolete; the whole white outer margin of the base of the primaries of approximately the same width, not strongly widened near the primary-coverts and not reaching the shafts. Black of face apparently narrower. Separable from *C. a. analoïdes* by the absence of the speculum and by a longer bill, grayer belly, and less black on the face.

Habitat.—Central-northern Perú in the upper Marañón Valley.

Description of type.—(Worn plumage.) Upper parts light Slate Gray becoming paler (Deep Gull Gray) on the rump and upper tail-coverts. Forehead, lores, a narrow line around the eye, the extreme anterior part of the malar region, and a narrow chin spot sooty black; throat and breast between Dark Gull Gray and light Neutral Gray; belly somewhat paler medially but not broadly white as in *analoïdes;* thighs gray like the flanks; under tail-coverts Auburn with narrow pale grayish tips. Lesser upper wing-coverts gray like the back; median and greater series black with gray margins and tips, broader and whiter near the tips of the outermost greater coverts; remiges black, all but the outermost primary with narrow pale margins (except toward the tips); margins of tertials gray, those of the primaries and secondaries whiter but rather uniform in width, not widening near base to reach the shaft nor to form a white speculum visible beyond the coverts (as in *griseiventris*); inner margins of remiges with narrow white margins becoming obsolete terminally; under wing-coverts gray like the flanks. Tail black with narrow, light grayish outer margins, broadest basally; all the rectrices but the middle pair with a large, more or less rectangular patch on the inner webs at about one-third the distance from the tips; spots on outermost feathers largest. Bill pale, dull yellow (in dried skin); feet brown. Wing, 65 mm.; tail, 56¼; exposed culmen, 9; culmen from base, 11; tarsus, 19.

Remarks.—Young males are about like those of *griseiventris* except for the absence of the white speculum on the wing.

Dr. Hellmayr advises me that he has seen a male from Baños, near Cajamarca, which he had noted as showing hardly a trace of white at the base of the primaries—evidently referable to this new form.

Volatinia jacarina peruviensis (Peale).

Geospiza peruviensis PEALE in WILKES, U. S. Expl. Exped., 8, p. 115, 1848—between Callao and Lima, Perú; U. S. Nat. Mus.

Volatinia jacarini CASSIN in WILKES, U. S. Expl. Exped., Ornith., p. 135, 1858—synonymy.

Volatinia jacarini pacifica CHAPMAN, Amer. Mus. Novit., **143**, p. 11, 1924—Trujillo, Perú; Amer. Mus. Nat. Hist.

Five males from Chosica, April 14–17, 1922; a male from Vitarte, April 26; two males from Matucana, April 30 and May 1.

Compared with two males from Puente de Chimbo, western Ecuador; also with series of *atronitens* from Perú to Mexico and of *jacarina* from various parts of Brazil.

The series is fairly uniform in having the under wing-coverts, axillars and the inner margins of the remiges largely white. The remiges are distinctly brown in all the specimens (of which all but three appear to be adult), thus corroborating Chapman's observations on the coastal race. However, it is noted that several specimens are molting and the new primaries and secondaries are not much blacker than the old worn plumes, though the tertials are distinctly blacker; the character seems to be of distinct value regardless of season. One Matucana bird has all the remiges darker than the rest of the series, though worn, but they are not so black as in full-plumaged *jacarina* or *atronitens*.

Volatinia jacarina atronitens Todd.

Volatinia jacarina atronitens TODD, Proc. Biol. Soc. Wash., 33, p. 72, 1920—Campeche, Mexico; Carnegie Mus.

Three adult and two young males and one female from Chinchao, October 23–November 11, 1922; a male from Huachipa, September 21; a male from Vista Alegre, August 22.

Compared with a male from San Ramón, Perú, and a series from Venezuela, Colombia, and Central America, including eight skins from Mexico (Colima, Cuernavaca, and Teapa); also with eight birds from the coast of Perú, referable to *peruviensis* Peale, and twenty-six skins of *jacarina* from various parts of Brazil.

The Peruvian series appears to be as variable in respect to the extent of white on the wing lining as is typical *atronitens* from Mexico. One adult Chinchao male and the Huachipa bird have the under wing-coverts and axillars entirely black, with a trace of white on the inner margins of the remiges in the Huachipa skin. Two other Chinchao males have the coverts and axillars largely white; one has only a trace of white on the inner margins of the remiges while the other has a broad white border which reaches the shaft only a little less broadly than in *jacarina*. The Vista Alegre male has considerable white on the wing lining except on the margins of the quills where there is none. A male from San Ramón also has a proportion of white beneath the wing. The series from Colima, Mexico, exhibits similar variation.

Compared with the Mexican series, the Peruvian birds are a little larger, on the average, and are less purplish and more greenish, though a single bird from Teapa, Mexico, is about as greenish as the Peruvian examples. Colombian and Venezuelan skins are intermediate, with a little closer approach to the Peruvian birds. Unfortunately most of the skins have the blackish coloration obscured by tips and margins of varying hues of brown so that it is difficult to match the tones exactly. If the southern birds are worthy of separation the fact must be determined by more material than I have at present.

In any case, certain characters of the inland form in Perú and throughout its range appear to be not firmly established, and while some examples are sharply distinct from the coastal birds, others are separable with difficulty and still others go to another extreme in a trend toward *jacarina* of the Brazilian campos.

The adults of this form at hand show little trace of the brownish remiges so noticeable in my series of *peruviensis*, except in several old quills of the San Ramón specimen. In all the other specimens the quills are quite blackish.

The habits of this interesting finch have been noted by various authors and it is unnecessary to go into details here. The curious leaping into the air at frequent intervals has given the bird its local name of "Bailerino" or dancer.

Saltator maximus maximus (P. L. S. Müller).

Tanagra maxima P. L. S. MÜLLER, Natursyst. Suppl., p. 159, 1776—based on DAUBENTON, Pl. Enl. 205; Cayenne.

Two males and three females from Vista Alegre, August 16–October 15, 1922; one female from Huachipa, September 22; one male from Chinchao, October 29.

Compared with twenty skins from British Guiana, Venezuela, Colombia, Ecuador, and various parts of Perú; also with sixteen skins of *magnoides* from Guatemala and Limón, Costa Rica; and eight skins of *intermedius* from Buenos Aires and Boruca, Costa Rica and from Panamá.

This species was confined largely to the tropical zone but was found also in the subtropical. It inhabited the seclusion of low-growing beds of ferns and the almost impenetrable bushy thickets at the otherwise open heads of ravines, whence its clear whistle could be heard most often towards sunset. When one was surprised at the edge of a thicket, it at once ceased its song and dived into concealment, where it remained silent and wary, though its voice would rise again in triumphant vigor as soon as the intruder left the immediate vicinity. It was known locally as "Título."

Saltator coerulescens azarae D'Orbigny.

Saltator Azarae D'ORBIGNY, Voy. Amér. Mérid., Ois., p. 287, 1839—Moxos, Bolivia (cf. HELLMAYR, Novit. Zool., **32**, p. 6, 1925); Paris Mus.

A male from Río Colorado, Chanchamayo Valley, February 25, 1923.

Compared with several examples from Moyobamba and Lagunas, Perú.

I have no topotypical material for comparison, but the series agrees with the original description.

Saltator aurantiirostris albociliaris Philippi and Landbeck.

Pitylus albociliaris PHILIPPI and LANDBECK, Arch. Naturg., **29**, (1), p. 122, 1863—Socoroma, Arica, Chile; Santiago Mus.?

Saltator laticlavius SCLATER and SALVIN, P. Z. S. London, 1869, p. 151—Tinta, Perú.

A male from Matucana, May 3, 1922; a male and female from La Quinua, May 9 and 13; two females and a young male from Cullcui, Marañón River, December 15.

Compared with a series from Macate, Perú; also with a specimen of *iteratus* from Cajamarca.

The Expedition birds are referable to *albociliaris*, subject to the uncertainty surrounding the application of that name as discussed in

detail by Dr. Chapman (Amer. Mus. Novit., **261**, 1927). The Cullcui specimen is in fresh plumage; the other adults are badly worn. The young male from the mountains near Huánuco is in fluffy juvenal plumage which shows the pattern of the adult with some variation in colors; the breast band is dark olive gray, with the black adult feathers just beginning to appear.

The short, clear song of this interesting bird was heard most often from individuals perched on the upper twigs of low trees in conspicuous places, and the brightly colored bill and black-bordered white throat formed excellent field marks.

Spinus magellanicus peruanus Berlepsch and Stolzmann.

Spinus ictericus peruanus BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 352—c. e. and w. Perú; type from La Merced; Warsaw Mus.

Two males from Vista Alegre, August 17 and October 11, 1922; one adult male and one young male from Chinchao, October 28 and November 18; two females from Huánuco, 6,500 and 10,500 feet, July 29 and June 7.

Compared with sixty-six additional skins representing various races, from Perú, Ecuador, Bolivia, and northern Chile (many in Amer. Mus. Nat. Hist. and U. S. Nat. Mus.).

The Vista Alegre birds are fairly typical and compare well with specimens from La Merced although there is some variation in the exact tone of yellow. The Chinchao adult shows a strong tendency toward the characters of *S. m. capitalis* of which I have (among other representatives of that form) two examples from Huaynapall (near Huamachuco) which are comparable to highland Ecuadorian skins. However, I believe that this Chinchao bird is a little closer to typical *peruanus* since the rump is less brightly yellow than in *capitalis* and the yellow of the outermost primary is inclined to reach the shaft, which it does not seem to do in *capitalis*. The approach to the more northern form is shown by the olivaceous tone of both upper and under parts.

The young male from Chinchao and the Huánuco females also are not typical of *peruanus* and, like the Chinchao adult, seem to represent an approach to a highland form intermediate between *capitalis* and *urubambensis*, but since they are not fully adult it is difficult to place them with assurance. With them may be associated three specimens from Macate.

After a careful study of the series of seventy-two skins from the various localities, I venture to propose an arrangement at variance with that of Mr. Todd who reported on the same problem with, in

part, much the same material. I believe that all the Peruvian members of the *magellanicus*, *capitalis*, and *peruanus* groups are members of a single species, bearing the earliest specific name, *magellanicus*. It is evident that the birds of the high elevations are distinct from those of the lowlands but examples from intermediate localities are precisely intermediate in characters though in a somewhat irregular manner. Todd, in his revision of the group (Ann. Car. Mus., **17**, p. 52, 1926), noted that there was a difference in the vertical distribution of *paulus* and *capitalis* although he separated these forms specifically. Todd further mentions a single example of *peruanus* from Pisac, Perú, from which locality there were also specimens of *urubambensis*, which seemed to point to necessary specific distinction of these forms, but an examination of this specimen (U. S. Nat. Mus. No. 273,660) suggests another possibility. The bird in question agrees with *peruanus* in size (though it is small even for that race), but agrees better with *alleni* in size and color, though it is not distinctly referable to either of these forms or to *urubambensis*, to which the other Pisac skins clearly belong. A specimen from Machu Picchu is a close match for it, and since both Pisac and Machu Picchu are on a border line where *alleni*, *peruanus*, and *urubambensis* might possibly meet, I see no objection to considering occasional specimens from these localities as intermediate individuals, even though other examples from the same localities may be definitely closer to any one of the three forms.

Birds from the lowlands of the Chanchamayo Valley seem to be recognizably distinct as *peruanus;* those from the highlands of the Cuzco region form another separable form, *urubambensis;* specimens from the coastal lowlands are closest to *paulus* (treated below); and examples from the northern highlands belong to *capitalis; alleni* is not known to reach Perú but is found in the campos of Matto Grosso, Brazil, and eastern Bolivia. Examples taken in localities between any adjacent regions mentioned herewith show what may be interpreted as intermediate characters. For example, skins from the Junín Plateau show a mixture of the characters of *urubambensis*, *peruanus*, and *paulus;* those from a short distance down the western slopes (as at Matucana), begin to approach *paulus* somewhat more closely; toward the north, the highland birds approach *capitalis* while those from relatively low localities show a tendency toward *paulus* (as at Macate) or toward *peruanus* (as at Vista Alegre). The Maynapall specimens, though referable to *capitalis*, show a tendency toward *urubambensis* in a maximum wing length (71–73 mm.).

Thus seen, *urubambensis* forms a wide-ranging species, exhibiting altitudinal and geographical variants some of which are recognizable as distinct races, the rest being intermediates.

Spinus magellanicus paulus Todd.

Spinus peruanus paulus TODD, Ann. Car. Mus., 17, p. 51, 1926—Zamora, Ecuador; Amer. Mus. Nat. Hist.

A male and a female from Santa Eulalia, April 21, 1922; a young female from Vitarte, April 26.

Compared with ten additional examples from the coast of Perú, six specimens from the lowlands of Ecuador (including the type of *paulus*), four topotypes of *peruanus*, and much additional material from other parts of Perú (largely from Amer. Mus. Nat. Hist. and U. S. Nat. Mus.).

The coastal Peruvian birds average larger and brighter yellow than the Ecuadorian specimens of *paulus*, but the differences are not constant. The type of *paulus* is unusually brightly colored compared with the rest of the Ecuadorian series at hand, but it is exceeded in this respect by at least two of the Peruvian birds and matched by others. The measurements of Peruvian and Ecuadorian skins overlap. It is possible that a new Peruvian race could be described, but I prefer to see a larger series of Ecuadorian examples before determining the distinctness of such a form.

On the other hand, the entire series is readily separable from Chanchamayo Valley examples of *peruanus* by the much clearer and paler yellow of the under parts, more yellowish back, brighter rump and upper tail-coverts, and greater extent of yellow on the two middle rectrices.

Spinus atratus (D'Orbigny and Lafresnaye).

C(arduelis) atratus D'ORBIGNY and LAFRESNAYE, Mag. Zool., 7, cl. 2, p. 83, 1837—La Paz, Bolivia; Paris Mus.

Three males from La Quinua, May 16, 1922; one male from Huánuco Viejo, December 24.

Compared with one Bolivian, one Argentine, and two Chilean skins.

Two of the Peruvian birds are rather dull (brownish) black; the others are clearer black and clearer yellow, especially the Huánuco Viejo specimen which, furthermore, has the yellow of the belly broadly extended toward the flanks where the feathers are tipped

with the same color; the rump is similarly tipped with dull olive yellow. The appearance of this specimen is suggestive of a probable specific origin from some yellow-bellied, yellow-rumped progenitor.

Spinus olivaceus Berlepsch and Stolzmann.

Spinus olivaceus BERLEPSCH and STOLZMANN, Ibis, 1894, p. 387—Vitoc, Perú; Warsaw Mus.

Two males from Vista Alegre, October 11 and 18, 1922.

No material for comparison.

One of the birds has the lower under parts distinctly lighter in tone than the other, with the back rather darker, i. e. with the centers of the feathers more extensively dusky and the margins greener, less yellowish.

Sicalis luteola raimondii (Taczanowski).

Sycalis raimondii TACZANOWSKI, P. Z. S. London, 1874, p. 133—Lima, Perú; Warsaw Mus.

Six males and one female from Chinchao, November 13–18, 1922.

Compared with eight males from Lima, Vitarte, and Chorillos, Perú (Amer. Mus. Nat. Hist.) and a female from Cajamarca (Field Mus. Nat. Hist.); also with thirty-two specimens of *luteiventris* from Chile, Bolivia, Argentina, Uruguay, and Matto Grosso, Brazil.

Compared with the series of *luteiventris*, the Peruvian specimens have shorter wing and tail (males with wing 67½–73½ mm. and tail 44½–50, as against wing 73–77 and tail 51–58) and have the yellow of the under parts slightly more tinged with orange, being on the orange side of Lemon-Chrome rather than between Lemon-Chrome and Lemon Yellow; the Chinchao and Cajamarca birds are a trifle more deeply colored than those from the coast. The upper parts are not appreciably different in the two subspecies although none of the Peruvian birds is as brown on the margins of the dorsal feathers as are a few of the Argentine specimens. The latter, in turn, are browner than the Chilean, Uruguayan, and south-Brazilian examples, though these were taken in a different season. The race, *raimondii*, is not strongly marked but appears to be just recognizable.

The birds were found at Chinchao in small flocks scattered through the open parts of a coca plantation.

Sicalis olivascens chloris (Tschudi).

Sycalis chloris TSCHUDI (ex CABANIS MS.), Faun. Per., Aves, p. 216, 1846—Perú; Berlin Mus.

Two males from Matucana, May 3 and 4, 1922.

Compared with twelve skins from Antofogasta and Atacama, Chile; also with two specimens of *salvini* from Huánuco, Perú, and two of *sordida* from Jujuy, Argentina.

One of the Matucana birds has been compared with the type by Dr. Hellmayr and found to agree. This specimen is in complete plumage though moderately worn; the other skin is quite worn and stained.

These finches were not uncommon about Matucana, being found throughout the village in the streets, on the roofs of the houses, and about the dooryards. They were either single or in small groups and added a touch of color to the dull, mud-walled buildings. In the open country they were seen much less often.

Sicalis olivascens salvini (Chubb).

Pseudochloris salvini CHUBB, Bull. Brit. Orn. Club, 39, p. 70, 1919—Viña, Huamachuco, n. Perú; British Mus.

A male and female from Huánuco, May 27 and 26, respectively, 1922.

Compared with fourteen specimens of *chloris* from Matucana, Perú, and Antofogasta and Atacama, Chile, and with two skins of *sordida* from Jujuy, Argentina.

The Huánuco birds are definitely smaller than *chloris*, having wing measurements of 73 mm. (male) and 72 mm. (female) as compared to 77¼ and 82 in *chloris*. Chubb's type of *salvini* has a recorded wing measurement of 73 mm. Further than the difference in size there is no noticeable criterion for the separation of this race, although the bill of *salvini* appears to be shorter and blunter and thereby thicker in proportion to its length. Both Huánuco birds are in molt, the male nearly complete and the female not so far advanced, but in both examples the second primary (which is the longest one in this species) is that of the old plumage, thereby furnishing a reliable measurement.

Sicalis uropygialis sharpei (Berlepsch and Stolzmann).

Pseudochloris sharpei BERLEPSCH and STOLZMANN, Ibis, 1894, p. 386—"Peruvia centrali"; type from Ingapirca; Warsaw Mus.

A male from La Quinua, May 8, 1922; a male and two females from Huánuco Viejo, December 19 and 21.

Compared with three males and a female from Junín, and with specimens of *uropygialis* from Puno, Perú, and San Pedro (Antofogasta) and Chintaguaia (Tarapacá), Chile.

My specimens are referable to *sharpei* although the differences between that race and *uropygialis* seem to be not perfectly constant. The La Quinua bird has the posterior auriculars distinctly grayish but the sides and flanks are olive, not gray, and the under wing-coverts are distinctly yellowish rather than white. The San Pedro, Antofogasta, specimen of *uropygialis* shows a tendency toward the characters of *sharpei* by having the anterior auriculars suffused with yellow, the sides and flanks gray, and the under wing-coverts mostly white. Both of these intermediates seem to have the characters ascribed to *connectens* Chapman, but for geographic reasons are best considered as belonging to *sharpei* and *uropygialis*, respectively, though showing the interrelationships of the three forms by individual variation. Females and young males are not as strongly marked racially as the adult males.

Myospiza aurifrons aurifrons (Spix).

Tanagra aurifrons SPIX, Av. Bras., **2**, p. 38, pl. 1, fig. 2, 1825—"in provincia Bahiae," errore; Fonteboa, Rio Solimöes, suggested by HELLMAYR, 1910; type lost.

Three males from Vista Alegre, August 26 and October 14, 1922; a male and a young female from Chinchao, October 22 and November 7; and a female from Puerto Bermúdez, March 9, 1923.

Compared with twelve skins from Brazil (Porto Velho, Manáos, and Itacoatiará), twelve from various parts of Perú (San Ramón, Yurimaguas, and Moyobamba), and a female from Todos Santos, Bolivia.

I can find no constant characters in this series to form a basis for dividing it. The female from Todos Santos, Bolivia, should represent the race *meridionalis* but does not differ from the Peruvian birds. I have not seen *zamorae*.

My Vista Alegre and Chinchao specimens were taken on open hillsides; the Puerto Bermúdez example was found in an open field adjoining the river. Both tropical and subtropical zones are represented.

Incaspiza personata (Salvin).

Haemophila personata SALVIN, Novit. Zool., **2**, p. 8, 1895—Cajamarca; British Mus.

A single male from Cullcui, Marañón River, December 11, 1922.

Compared with a female paratype from Cajamarca (Amer. Mus. Nat. Hist.) and a male from near Otuzco. Also compared by Dr. Hellmayr with the type in the British Museum.

The single specimen obtained by the Expedition was the only one observed. It was found perched on agave stalks in a rather open field and was wild and wary.

Poospiza hispaniolensis Bonaparte.

P(oospiza) hispaniolensis BONAPARTE, Consp. Av., 1, p. 473, 1850—"ex Ins. Sti. Domin.," errore, type labeled "Pérou?"; Paris Mus.

Poospiza bonapartii SCLATER, P. Z. S. London, 1867, p. 341, pl. 20—Lima; new name for *Poospiza hispaniolensis* BONAPARTE.

A young male from Matucana, April 30, 1922.

No material for comparison.

The specimen is in very worn condition but agrees with the descriptions and Sclater's plate.

Zonotrichia capensis peruviensis (Lesson).

Pyrgita Peruviensis LESSON, L'Institut, 2, No. 72, p. 317, 1834—Callao, Perú.

A male from Vitarte, April 26, 1922; a male from Santa Eulalia, April 21; a female from La Quinua, May 14; an adult male, a young male, and two females from near Huánuco, 6,500–12,000 feet, June 2–July 30; three males from Chinchao, October 27–November 11; a female from Cullcui, Marañón River, December 15; and a male from Huánuco Viejo, December 25.

Compared with a small series from various parts of Perú including two examples of *pulacayensis* from Puno.

Certain differences have been noted in this series that may warrant the subdivision of *peruviensis*, but I prefer to leave the matter in abeyance until more material is available from certain localities.

The ubiquitous "Gorrion" was found from the coast to the top of the Andes and down to the subtropical zone of the interior valleys. Its rather mournful but sweet song was heard throughout the day and was a cheerful feature of many a pleasant valley as well as a friendly accompaniment of dusty miles of desert roadside. The birds living on the top of the divide seemed to have a slightly different song than those inhabiting the coastal plain, while in the interior valleys both types of song were noted.

At Cullcui in the upper Marañón Valley, many examples of this species were observed imitating the aerial antics of *Phrygilus fruticeti peruvianus* with which they were associated, and sometimes also attempting to imitate the song with more or less success.

Phrygilus gayi chloronotus Berlepsch and Stolzmann.

Phrygilus chloronotus BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 350—Tarma, c. Perú; Warsaw Mus.

A male from Cerro de Pasco, May 8, 1922; an adult and a young male from La Quinua, May 11 and 14; two males and a female from Cullcui, Marañón River, December 13–15.

Compared with seven skins from Macate and one from Cajamarca, Perú.

The Cerro de Pasco and La Quinua birds are almost topotypical. None of the entire series has the color of the back approaching the tawny russet ascribed to *punensis*, although there is a slight variation in the tone of yellow in the various specimens, the Macate birds showing both brownest and yellowest extremes. The immature male is in juvenal plumage, exhibiting buffy superciliary stripes and wing bars which are lost in the adult dress. May birds are badly worn; December birds are perfectly fresh.

I use the specific name *gayi* for this group although I am not convinced that it should not be dropped as unidentifiable, in which case the name *atriceps* D'Orbigny and Lafresnaye would be available.

Phrygilus fruticeti peruvianus Zimmer.

Phrygilus fruticeti peruvianus ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., **12**, p. 63, 1924—Matucana, Perú; Field Mus. Nat. Hist.

Four males (including the type) and two females from Matucana, April 28–May 4, 1922; three males from Cullcui, Marañón River, December 11–16.

Compared with eight specimens from Cajamarca and sixteen from Macate, Perú; also with fourteen specimens of *fruticeti* from Chile.

The plumage has been discussed in detail in the original account.

The birds were common at Cullcui on the open hillsides and in the cultivated fields and the thorny thickets bordering the river. The males were very active and were in full song, being more in evidence than any other species of bird at that locality. The song was loud and musical, consisting of a few preliminary notes followed by a rippling cadence that was strongly suggestive of the effort of the North American Lark Bunting (*Calamospiza melanocorys*). This was sometimes given from the ground or from a perch on post or weed stem, but was just as often delivered from overhead as the bird sprang into the air with rapid wing-beats, and then fluttered down to earth

with a retarded, butterfly-like motion. This, again, was suggestive of the flight-song of the Lark Bunting.

Examination of a series of *Calamospiza* and of the present species (made in a moment of curiosity) produced some surprising results. *Calamospiza* was found to have a somewhat stouter bill, heavier rictal bristles, and a shorter tail in proportion to the length of wing than *Phrygilus fruticeti*, but other characters are not so marked as might appear at first glance. The long tertials of *Calamospiza* give the wing a shape unlike that of *P. fruticeti* but not greatly different from that of *P. alaudinus*. The conspicuous white alar patch of *Calamospiza* is suggested by the white areas on the same feathers in *fruticeti*, in which the white margins of the tertials are still present though not so sharply defined. The outer margins of the outer webs and the tips of the inner webs of the outer rectrices are white in *Calamospiza*, gray in *fruticeti*. Females and young males of both species are streaked above and below in somewhat similar fashion and the young males of *Calamospiza* acquire their first black body plumage on face, throat, and breast where *fruticeti* also is black, and the black is sometimes tipped with whitish in both species. The size and shape of the feet are about the same, though the claws of *fruticeti* may average longer; in *Calamospiza* the feet of adult males are dark, in *fruticeti* they are pale.

However, in most species of *Phrygilus* the fifth primary (from the outside) is equal to, or longer than, the first whereas in *Calamospiza* it is shorter than the first, giving the wing-tip a recognizably distinct appearance; this, with the shape of the bill, may serve to separate the two genera well enough, although the wing-tip of *Calamospiza* is not unlike that of *Melanodera melanodera*, long considered as a species of *Phrygilus*. A more careful and detailed study of the various species mentioned may show that they deserve to be placed somewhat closer to each other in generic sequence than has usually been supposed.

Phrygilus unicolor inca Zimmer.

Phrygilus unicolor inca ZIMMER, Proc. Biol. Soc. Wash., **42**, p. 88, 1929—mountains near Huánuco, Perú, 12,200 feet; Field Mus. Nat. Hist.

A male from La Quinua, May 8, 1922; three males (including the type) and four females from the mountains near Huánuco, 12,200 feet, June 18–26.

Compared with two specimens from the mountains near Balsas, Perú; also with twenty specimens of *unicolor* from Chile, twenty

specimens from Las Pavas, Tucumán, Argentina, and twelve from Bolivia (Carnegie Mus.); and three specimens of *grandis* from Ecuador.

The plumages have been discussed in the original account of this subspecies.

Phrygilus alaudinus bipartitus Zimmer.

Phrygilus alaudinus bipartitus ZIMMER, Field Mus. Nat. Hist. Publ., Zool. Ser., 12, p. 61, 1924—Cajamarca, Perú; Field Mus. Nat. Hist.

A male from Vitarte, April 26, 1922; three males from Matucana, May 1–4; three males and a female from Huánuco, May 24 and July 29.

Compared with three males and a female from Cajamarca (including the type) and two males from Milluachaqui, Perú; also with ten specimens of *alaudinus* from Chile and six skins of *excelsus* from Cochabamba, Bolivia, and Puno, Perú.

An account of the plumage of this subspecies has been published with the original description. One of the Matucana males is in spotted juvenal plumage (May 4).

The species was found on the open hillsides in the arid tropical and subtropical zones.

Phrygilus plebejus plebejus Tschudi.

Ph(rygilus) plebejus TSCHUDI, Arch. Naturg., **10**, (1), p. 290, May, 1844—Perú (probably Junín highlands); Mus. Neuchâtel.

A male from Matucana, May 3, 1922; two males (adult and young) from La Quinua, May 8 and 14; two males from the mountains near Huánuco, 10,500 and 12,200 feet, June 13 and 19; a young male and a female from Huánuco Viejo, December 24.

Compared with twenty additional specimens from near Otuzco, Cajamarca, Macate, Junín, and Puno, Perú; San Pedro, Antofogasta, Chile; Laguna Blanca (Catamarca), Cerro de la Laguna (Jujuy), and Maimara (Jujuy), Argentina.

There seem to be no constant differences of color in this material, but there is a gradually increasing length of wing toward the south. The Argentine and Chilean specimens are larger than my Peruvian skins while the north-Peruvian examples seem to approach the measurements of *ocularis*. Probably there is complete gradation in size from one end of the range to the other without any well-marked lines of demarcation.

Buarremon torquatus poliophrys Berlepsch and Stolzmann.

Buarremon poliophrys BERLEPSCH and STOLZMANN, P. Z. S. London, 1896, p. 347—Maraynioc, Perú; Warsaw Mus.

An adult male, a young male, and a female from the mountains near Huánuco, 10,500 feet, June 1–3, 1922, and a female from Panao, July 3.

Compared with two specimens of *assimilis* from Molinopampa, Perú, and several skins of the same race from Colombia and Ecuador; and a Bogotá skin of *atricapillus*.

The specimens agree well with the original description and represent a good intermediate between *torquatus* and *assimilis*. The Molinopampa specimens are closer to the present form than the Colombian and Ecuadorian skins in that they have traces of the black pectoral band visible on the extreme sides of the breast. The young male is in fluffy juvenal plumage and is largely olive brown with traces of dusky brown on the sides of the pileum and the sides of the head; the throat is yellowish white and the median line of the lower breast and belly is dull yellow.

Atlapetes rufigenis (Salvin).

Buarremon rufigenis SALVIN, Novit. Zool., 2, p. 5, pl. 1, fig. 2, 1895—n. Perú, type from Huamachuco or Cajabamba; Tring Mus.

A female from Cullcui, Marañón River, December 11, 1922.

No material for comparison.

The nearest ally of this species appears to be *Atlapetes seebohmi*. I can not agree with Ridgway (Bull. U. S. Nat. Mus., **50**, (1), p. 438, 1901) in placing it in the genus *Melozone*.

This solitary individual was the only one of its kind found in the region. It was rather wary and dodged very actively about the ruins of an old stone building, which was overgrown with vines and bushes. The situation was adjacent to the banks of a small tributary of the Marañón which was lined with bushes and trees and formed a veritable oasis of semi-humid conditions in an otherwise arid locality.

This record extends the known range of the species some distance to the southward.

Atlapetes schistaceus mystacalis (Taczanowski).

Buarremon mystacalis TACZANOWSKI (nec *Arremon mysticalis* SCLATER, 1852, = *Atlapetes albofrenatus* BOISSONNEAU), P. Z. S. London, 1874, p. 515—Ninarupa; type formerly in Warsaw Mus., now lost.

Buarremon taczanowskii SCLATER and SALVIN, P. Z. S. London, 1875, p. 236, pl. 35, fig. 2—new name for *Buarremon mystacalis* TACZANOWSKI.

Two females and one young male from the mountains near Huánuco, 12,200 feet, June 21 and 23, 1922; two males and two young females, Panao, 10,300 feet, July 5–9.

Compared with two Bogotá skins of *schistaceus* and a male and female from the coast range west of Popayan, Colombia; two males of *castaneifrons* from Culata and Río Mucujón, Venezuela; and five males and two females of *tamae* (including the type) from Páramo de Tamá, Venezuela and Colombia.

I have no topotypical material for comparison, but the birds in hand agree well enough with the original description and Taczanowski's more detailed one in the Ornithologie du Pérou, except that the nuchal region is not always paler than the crown as described.

The three young birds are interesting. In size they are fully grown. The Huánuco specimen and one from Panao are in fluffy plumage, with Prouts Brown back and dull ochraceous crown and nape, while the forehead is quite broadly black with the white loral patch reduced in size. Beneath they are brown on the breast, sides, flanks, and under tail-coverts, and grayish buffy white on the belly, with indistinct dusky streaks; the throat is purer white with blackish tips. The sides of the head are black except for the white loral spot and a white malar stripe, as in the adults. The other young female from Panao is somewhat older and is like the younger birds above, but below is more like the adults though with a greenish yellow wash over all, suggesting relationship with some of the yellow-bellied species.

I am induced to place this form in the *schistaceus* group because of certain evident affinities and the geographic replacement shown by these two together with *castaneifrons* and *tamae*. As has been pointed out by other writers, *mystacalis* and *castaneifrons* resemble each other more than either does *schistaceus*, although the last named occurs in the intermediate localities; *castaneifrons*, however, is somewhat closer to *schistaceus* than is *mystacalis*. In the series of *tamae* at hand, one example shows a trace of white speculum on the primaries beyond the coverts, and two others show a deepening of color on the anterior part of the crown nearly matching the color of the head in *schistaceus*. A larger series of the various forms probably would show even closer approach throughout.

I agree with Ridgway in placing this genus among the finches rather than with the tanagers as was done by Sclater and Berlepsch. Aside from the structural features which recommend this course, the habits of the present species appear to be more fringilline than tanagrine. The birds are very like the northern Towhees (*Pipilo*) in general appearance and actions, scratching on the ground under bushes and in other shady places and being found far more often there than on more elevated perches. However the genus is placed, it unquestionably is close to the border line between the two families.

Atlapetes nationi nationi (Sclater).

Pipilo mystacalis TACZANOWSKI (nec *Buarremon mystacalis* TACZANOWSKI, t. c., p. 515), P. Z. S. London, 1874, p. 521—Ninarupa, Junín, Perú; formerly Warsaw Mus., now lost.

Buarremon nationi SCLATER, P. Z. S. London, 1881, p. 485—above Lima, 10,000 feet; British Mus.

Buarremon matucanensis BRABOURNE and CHUBB, Bull. Brit. Orn. Cl., 35, p. 20, 1914—Matucana; British Mus.

Two males and two females from Matucana, April 29 and 30, 1922.

Compared with a specimen in the American Museum of Natural History from Matucana (ex British Museum), labeled by Chubb as "compared with the type of *nationi* =*B. matucanensis*."

Berlepsch and Stolzmann's *Pogonospiza mystacalis brunneiceps* from Pauza, Peru, is described as differing from *P. mystacalis mystacalis* (=*A. n. nationi*) by having the head brown instead of blackish, the front and supercilium more extensively mixed with white, the black of the chin more restricted, the throat more strongly buffy, and the bill longer. The brown head is shown by all the specimens of *nationi* examined, the amount of white is variable in the same series, but the measurements of wing, tail, and bill seem to average less than those of *brunneiceps*. It is possible, therefore, that *brunneiceps* may prove to be separable on average differences of size, though this is questionable. In any case the present specimens are typical *nationi*.

I am unable to recognize the genus *Pogonospiza* of Berlepsch and Stolzmann of which the present species is the type. This genus was founded on differences from *Buarremon* (type *B. torquatus*) in which *Pogonospiza* agrees exactly with *Atlapetes*. I am unable to separate the two latter genera, between which Berlepsch and Stolzmann did not attempt to point out any differences. Further, I can see no

resemblance to *Orchesticus* (suggested in the original description of *Pogonospiza*) which warrants placing these two genera next to each other as was done by Berlepsch in his revision of the Tanagers (Ber. V. Int. Orn.-Kongr., p. 1108, 1912).

These finches were beginning to nest when I left the vicinity of Matucana, but I did not succeed in finding any complements of eggs. The nests were constructed in small trees in the lower parts of the river valley, being placed about eight or ten feet from the ground.

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